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Similarity

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Score 567; DB 4; Pred. No. 4.9e-137

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                                                             The invention relates to primers for synthesising full length cDNA clones. 830 cDNA molecules encoding a human protein have been isolated and nucleotide sequences of 5'- and 3'-ends of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cDNA libraries that were synthesised by the ollyo-capping method. The primers enable the production of the full length cDNA easily without any special methods. The present sequence was used as the representative sequence from a human clone which was used in homology searches to identify the printed specification, but was obtained in CD-ROM format directly from EPO
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11-JAN-2000; 2000JP-00118774
02-MAY-2000; 2000JP-00183765
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su A, Sugiyama
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The invention relates to primers for synthesising full length cDNA clones. 830 cDNA molecules encoding a human protein have been isolated and nucleotide sequences of 5'- and 3'-ends of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful
                                                                                                                                                                                                11-JAN-2000;
02-MAY-2000;
                                                                               830 Primers useful for synthesizing in genetic manipulation.
                                                                                                                                                                                                                       08-JUL-1999;
                                                                                                                                                                                                                                              07-JUL-2000; 2000EP-00114089
                                                                                                                                                                                                                                                                     05-SEP-2001.
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                                                                                                                                                                                                                                                                                                                                        Human; full length cDNA; cDNA synthesis; oligo-capping; ss
                                                                                                                                                                                                                                                                                                                                                               Human cDNA 5'-end sequence,
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su A, Sugiyama
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; 2000JP-00118774.
; 2000JP-00183765.
                                                        ID NO 618; 1380pp +
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wa T, Nagai
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K, Kojima
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S, Otsuki
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RESULT 7
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AAI25096 standard;

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12-OCT-2001 Probe #15029

(first entry)
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Matches 637;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 697 BP; 183 A; 160 C; 186 G; 163 T; 0 U; 5 Other;
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                                                                          CAGG---ACAATGAAACAGGAATTTATTATGAGA--CATGGAATGTAAAAGCCAGCCCAG
                                                                                                                 AGTTCAAGTAGCAACTATATCAAGGAAACATGTTCAACCAAATGGCAAAAGTGGGTGAAA
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                                                        CAAGGACAATNGAAACAAGGAATTTATTATGAGAACATGGAATTTTAAAAGCCANCCCAA
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Pred. No. 4.9e-137;
0; Mismatches 24;
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26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                               microarray, which can be used for measuring human gene expression in a sample derived from human cervical epithelial cells. By measuring gene expression, the probes are therefore useful in grading and/or staging of diseases of the cervix, notably cervical cancer. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-SEP-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  from human HeLa cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 genome-derived single exon nucleic acid probes useful for analyzing
expression in human cervical epithelial cells.
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                                                                                                                                                                                                                                                                                                                                                                                                           494 BP;
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                                                                                                                                                                                                                                                                AAGCCAGCCCAGAAAAAGGGGGCAGAGACATGGTTTGATTCCTACGACTGTTCCAAAATTTG
                                                                                                                                                                                                                                                                                                                          TGGCAAAGTGGGTGAAACAGGACAATGAAACAGGAATTTATTATGAGACATGGAATGTAA
                                                                                                                                                      ACTATACAAGAATATTTCTTTACAGTGGAGAACCTACTTATCTGGGAAATGAAACATCTG
                                                                                                                                                                                                        TGTTAAGGACCTTTAACAAGTTGGCTGAATTTGGAGCAGAGTTCAAGAACATAGAAACCA
                                                                                                                                                                                                                                                                                                  TGGCAAAGTGGGTGAAACAGGACAATGAAACAGGAATTTATTATGAGACATGGAATGTAA
 TGATTGTGCACAAACAGTTCTATTTGTTTTATAATTTTTGAATATTTGGTTTTTTACCTATGA
                                                    TCAAACCACATTTGCCAACTAAAGAATTTCTGTTGAGTCTCTTGCAAATTTTTGATGCAG
                                                                                                                                                                                         TGTTAAGGACCTTTAACAAGTTGGCTGAATTTGGAGCAGAGTTCAAGAACATAGAAACCA
                                                                                                                                                                                                                                              AAGCCAGCCCAGAAAAGGGGGCAGAGACATGGTTTGATTCCTACGACTGTTCCAAATTTG
                                                                                                          TTTTTGGGCCAACAGGAAACAAGACTCTTGGTTTAGCCATAAAAAGATTTTATTACCCCT
                                                                                                                                      ACTATACAAGAATATTTCTTTACAGTGGAGAACCTACTTATCTGGGAAATGAAACATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hanzel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             invention relates to human single exon nucleic acid probes present sequence is one such probe. The SENPs are derived HeLa cells. The SENPs can be used to produce a single exon
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2000US-0207456P.
2000US-00608408.
2000US-00632366.
2000US-00632366.
2000US-0234687P.
2000US-0236359P.
2000GB-00024263.
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Pred. No. 2.4e-117;
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                                                                                                                                                                                                                                                                                                                                                                                                             152 T; 0 U; 0 Other;
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30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                   The invention relates to a single exon nucleic acid probe for measuring human gene expression in a sample derived from human foetal liver. The single exon nucleic acid probes may be used for predicting, measuring and displaying gene expression in samples derived from human fetal liver. The present sequence is a single exon nucleic acid probe of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
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30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
04-OCT-2000;
The present invention relates to single exon nucleic acid probes (SENP). The present sequence is one such probe. The probes are useful for producing a microarray for predicting, measuring and displaying gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-JAN-2001; 2001WO-US000663
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Probe; microarray; human; placenta;
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expression in human placenta.
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04-FEB-2000;
26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                    Human; gene expression; heart; microarray; vascular system; probe; cardiovascular disease; hypertension; cardiac arrhythmia;
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                                                                                                                                                        30-JAN-2001;
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Similarity 100.0%; Pred. No. 2.4e-11
91; Conservative 0; Mismatches 0
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; 2000US-0207456P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               for gene expression analysis in human heart cell sample
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      measuring human gene expression in a sample derived from human heart. The present sequence is one such probe. The probes may be used for predicting, measuring and displaying gene expression in samples derived from the human heart via microarrays. By measuring gene expression, the probes are useful for predicting, diagnosing, grading, staging, monitoring and prognosing diseases of the human heart and vascular system e.g. cardiovascular disease. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 4;
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                                                                                                                          AATTCCCTTTTATTAAAATAACATATGAAGAAATCCCTTTACCTATCAGAAACAAAAACAC 1073
                                                                                                                                                        TGATTGTGCACAAACAGTTCTATTTGTTTTATAATTTTGAATATTGGTTTTTACCTATGA
                                                                                                                                                                      TGATTGTGCACAAACAGTTCTATTTGTTTTATAATTTTGAATATTTGGTTTTTACCTATGA 1013
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                                                                  TCTCTGGTTTA 491
                                                                                                             <u>AATTCCCTTTTATTAAAATAACATATGAAGAAATCCCTTTACCTATCAGAAACAAAACAC</u>
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100.0%; Pred. No. 2.4e-117;
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21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention provides a number of single exon nucleic acid probes which are derived from genomic sequences expressed in the human bone marrow. They can be used to measure gene expression in bone marrow samples, which may enable the improved diagnosis and treatment of cancer such as lymphoma, leukaemia and myeloma. The present sequence is one of the probes of the invention
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30-JUN-2000;
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microarray; cancer; leukaemia; lymp
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 494 BP; 170 A; 82 C;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-OCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JAN-2001; 2001WO-US000668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-AUG-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAK44992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (MOLE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                594 TGGCAAAGTGGGTGAAACAGGACAATGAAACAGGAATTTATTATTATGAGACATGGAATGTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          expression in human bone marrow.
  301
                                       894
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                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                 714
                                                                                                                     834
                                                                                                                                                                                                   774
                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             genome-derived single exon nucleic acid probes useful for analyzing
                                                                                                                                                                                                                                                                                                                                                                                                        Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULAR DYNAMICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                 PAGCCAGCCCAGAAAAGGGGGCAGAGACATGGTTTGATTCCTACGACTGTTCCAAATTTG
                       TCAAACCACATTTGCCAACTAAAGAATTTCTGTTGAGTCTCTTGCAAATTTTTTGATGCAG
                                                                                                                                                                                      ACTATACAAGAATATTTCTTTACAGTGGAGAACCTACTTATCTGGGAAATGAAACATCTG
                                                                                                                                                                                                                                                                                 TGTTAAGGACCTTTAACAAGTTGGCTGAATTTGGAGCAGAGTTCAAGAACATAGAAACCA
  TCAAACCACATTTGCCAACTAAAGAATTTCTGTTGAGTCTCTTGCAAATTTTTTGATGCAG
                                                                               TTTTTGGGCCAACAGGAAACAAGACTCTTGGTTTAGCCATAAAAAGATTTTATTACCCCT
                                                                                                      TTTTTGGGCCAACAGGAAACAAGACTCTTGGTTTAGCCATAAAAAGATTTTATTACCCCCT
                                                                                                                                                                                                                                         TGTTAAGGACCTTTAACAAGTTGGCTGAATTTGGAGCAGAGTTCAAGAACATAGAAACCA
                                                                                                                                                                                                                                                                                                                         AAGCCAGCCCAGAAAAAGGGGCAGAGACATGGTTTGATTCCTACGACTGTTCCAAATTTG
                                                                                                                                                                                                                                                                                                                                                                                                        TGGCAAAGTGGGTGAAACAGGACAATGAAACAGGAATTTATTATGAGACATGGAATGTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hanzel DK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 19549; 658pp + Sequence Listing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; 2000US-0207456P.
; 2000US-00608408.
; 2000US-00632366.
; 2000US-0234687P.
; 2000US-0236359P.
; 2000GB-00024263.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-0180312P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           45.3%; Score 491;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chen W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                             TTACAGTGGAGAACCTACTTATCTGGGAAATGAAACATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90 G; 152 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rank
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lymphoma; myeloma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.4e-117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         expression analysis; probe;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO:
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is one of
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ARESULT 12
AAK19040
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                                                                                                                                                   Query Match
Best Local S
Matches 491
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26-MAY-2000; 2000US-0207456P.
30-JUN-2000; 2000US-00608408.
03-AUG-2000; 2000US-00632366.
21-SEP-2000; 2000US-0234687P.
27-SEP-2000; 2000US-02346359P.
04-OCT-2000; 2000GB-00024263.
                                                                                                                                                                                                                                                                                                                              The present invention provides a number of single exon nucleic acid probes which are derived from genomic sequences expressed in the human brain. They can be used to measure gene expression in brain cell samples, which may enable the diagnosis and improved treatment of nervous system diseases such as Alzheimer's disease, multiple sclerosis, schizophrenia, envilancy and cancers. The present sequence is one of the probes of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; brain expressed exon; gene expression analysis; probe; microarray; Alzheimer's disease; multiple sclerosis; schizophrenia; epilepsy; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-483446/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-JAN-2001; 2001WO-US000667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-AUG-2001
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                                                                                                                                                                                                                                                      Sequence 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200157275-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (MOLE-)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
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                                                                                                                                                        491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     brain expressed single exon probe SEQ ID NO: 19031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             exon nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4;
                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULAR DYNAMICS INC
AAGCCAGCCCAGAAAAAGGGGGCAGAGACATGGTTTGATTCCTACGACTGTTCCAAATTTG
                                                                                           TGGCAAAGTGGGTGAAACAGGACAATGAAACAGGAATTTATTATGAGACATGGAATGTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTCTGGTTTA 1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATTCCCTTTTATTAAAATAACATATGAAGAAATCCCTTTACCTATCAGAAACAAAACAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGATTGTGCACAAACAGTTCTATTTGTTTTATAATTTTGAATATTGGTTTTTTACCTATGA
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                                                  TGGCAAAGTGGGTGAAACAGGACAATGAAACAGGAATTTATTATGAGACATGGAATGTAA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 19031; 650pp + Sequence Listing;
                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                      BP; 170
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                                                                                                                                             45.3%; out
100.0%; Pr
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                                                                                                                                                                                                                                                      A; 82 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       probes for analyzing gene expression
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                                                                                                                                                                           Score 491; pred. No.
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                                                                                                                                                Pred. No. 2.4; Mismatches
                                                                                                                                                                                                                                                      90 G; 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rank
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DR;
                                                                                                                                                                                                                                                      T; 0 U; 0 Other;
                                                                                                                                                                           2.4e-117;
                                                                                                                                                                                                        DB 4;
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                                                                                                                                                                                                   Length 494;
                                                                                                                                                     Indels
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RESULT 13
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XX ABS46
AC ABS46
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; single exon nucleic acid probe; liver; cirrhosis; hyperlipoproteinaemia; hyperlipidaemia; hypercholesterolaemia; coronary heart disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human liver single exon probe, SEQ ID No 19648.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABS44658;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABS44658 standard; DNA; 494 BP
                                                                                                                                                                                                                                                                                                                                                   03-AUG-2000;
21-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                        30-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                26-MAY-2000;
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                                                                                                                                                                                                                                                         (MOLE-)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1014
                                                                       genome-derived single exon nucleic expression in human adult liver.
                                                                                                                                                       2001-488898/53.
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Claim 4;

SEQ ID NO 19648; 658pp; English

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RESULT 14
ABS19237
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Human; ds; single exon probe; asthma; lung cancer; COPD; ILD chronic obstructive pulmonary disease; interstitial lung disfamilial idiopathic pulmonary fibrosis; neurofibromatosis; tuberous sclerosis; Gaucher's disease; Niemann-Pick disease;
                                                                                                                                            Human genome-derived single exon probe
                                                                                                                                                                                                         19-AUG-2002
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ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
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Pred. No. 2.4e-117;
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Complements of the 1230 Open reaching frames derived from the 1230 Open reaching the novel set of probes controlled are a microarray comprising the novel set of probes collection of detectably labeled nucleic acide derived from human lung, comprising (a) contacting the array with a collection of detectably labeled nucleic acide derived from human lung measuring the label detectably bound to each probe of the carray; identifying exons in a eukaryotic genome, comprising (a) algorithmically predicting at least one exon from genomic sequences of the eukaryote; and (b) detecting specific hybridisation of detectably comprising (a) identifying exons from genomic sequences of the eukaryote; and to detecting specific hybridisation of detectably comprising (a) identifying exons from genomic sequence by the method comprising (a) identifying exons from genomic sequence by the method comprising (a) identifying exons from genomic sequence by the method comprising (a) identifying exons from genomic sequence by the method comprising (b) measuring the expression of each of the exons in several comprising the exons in the tissues and/or cell types using hybridisation to a single exon comprising one for float sequences, mentioned in the secon, where a common pattern of expression of the exons since the exons in the tissues and/or cell types indicates that the exons should be assigned to a single gene; a peptide comprising one of 12011 sequences, mentioned in the specification, or encoded by the probes of the study of lung disease such as asthma, lung cancer, chronic obstructive pulmonary disease (COPD), interestitial lung disease (IID), familial idiopathic pulmonary fibrosis, neurofibromatosis, cuberous solerosis, Gaucher's disease, Niemann-Pick disease, Niemann-Pick disease, Permansky-pulmonary pulmonary haemosiderosis, pulmonary membrane disease. The cuberous sequence is a single exon probe open reading frame of the cuberous action. Note: The sequence data for this patent did not form part of the printed specification, but was 
04-FEB-2000;
26-MAY-2000;
30-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a spatially-addressable set of single exon nucleic acid probes for measuring gene expression in a sample derived from human lung comprising single exon nucleic acid probes having one 12614 nucleic acid sequences mentioned in the specification, or their complements or the 12387 open reading frames derived from the 12614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pulmonary histiocytosis; lymphangioleiomyomtosis; Karagener syndrome; pulmonary alveolar proteinosis; fibrocystic pulmonary dysplasia; primary ciliary dyskinesis; pulmonary hypertension; hyaline membrane disease; open reading frame; ORF.
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21-SEP-2000;
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                                   Jacobs K,
Spaulding
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V, Agostino
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New polynucleotides encoding human secreted proteins - derived fr human blood, kidney, foetal lung, placenta, testes, brain, ovary, pituitary, retina and colon cDNA libraries.
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Claim 1; Page 366; 641pp;

The present sequence represents an expressed sequence tag (EST), and is a polynucleotide of the invention. The polynucleotides of the invention are all secreted EST sequences isolated from a variety of human tissue sources. The EST sequences and proteins encoded by them are predicted to have useful biological activities which would make them suitable for treating, preventing or ameliorating medical conditions in humans and animals, although no supporting data is given. Suggested activities include nutritional activity, immune stimulating or suppressing activity, haematopoiesis regulating activity, tissue growth activity, haemostatic activity, haemostatic activity, haemostatic activity, haemostatic activity. and thrombolytic activity, receptor/ligand activity, anti-inflammatory activity, cadherin/tumour invasion suppressor activity, tumour inhibition activity. The EST sequences are also stated to be useful for gene therapy

Sequence 506 BP; 171 A; 86 C; 119 G; 130 T; 0 U; 0 Other;

유 성 뮰 Ś 밁 8 В Š 밁 8 밁 δ 밁 Ś Matches 402; Query Match Best Local 677 159 **399** 339 737 279 219 797 459 99 Similarity CAAGTAGCAACTATATCAGGAAACATGTTCAACCAAATGGCAAAGTGGGTGAAACAGGAC CAAGTAGCAACTATATCAGGAAACATGTTCAACCAAATGGCAAAGTGGGTGAAACAGGAC GCTGAATTTGGAGCAGAGTTCAAGAAACATAGAAACCAACTATACAAGAATATTTCTTTAC GAGACATGGTTTGATTCCTACGACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAGTTG GAGACATGGTTTGATTCCTACGACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAGTTG AATGAAACAGGAATTTATTATGAGACATGGAATGTAAAAGCCCAGCCCAGAAAAGGGGGGCA ACTCTTGGTTTAGCCATAAAAAGATTTTATTACCCCCTTCAAAC 899 AGTGGAGAACCTACTTATCTGGGAAATGAAACATCTGTTTTTGGGCCAACAGGAAACAAG AGTGGAGAACCTACTTATCTGGGAAATGAAACATCTGTTTTTTGGGCCAACAGGAAACAAG GCTGAATTTGGAGCAGAGTTCAAGAACATAGAAACCAACTATACAAGAATATTTCTTTAC Conservative 37.0%; 0; Mismatches Score 401.4; DB 2; Pred. No. 4.7e-94; Length Indels 0; Gaps 556 278 676 218 919 158 458 856 398 796 338 736

Search completed: April 22, Job time: 487.252 secs 2004, 00:39:08

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Copyright (c) 1993 - 2004 Compugen Ltd.
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SUMMARIES

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OS Homo sapiens
PN JP 200151134
PD 14-AUG-2001
PF 24-JUL-1998
PR 24-JUL-1998
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PC C12N15/09,A6
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24-JUL-1997 US 60/D53613
24-JUL-1997 US 60/D53613
PAUL O SHEPPARD, DIBRA G GILBERTON
C12NL5/09, A61K38/00, A61K48/00, C07K14/47, C07K16/18, C12N1/15,
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/mol_type="genomic DNA"
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1 (bases 1 to 4080)
Savukoski,M., Klockars,T., Holmberg,V., Santavuori,P., Lander,E.S and Peltonen,L.

CLN5, a novel gene encoding a putative transmembrane protein
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Savukoski, M., Klocka
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Homo sapiens
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Direct Submission
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1293. .2516
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/db_xref="taxon:9606"
/chromosome="13"
/map="13q22"
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/mol_type="mRNA"
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1 (CLNS) mRNA, complete
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Lander, E.S.

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Query Match
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Matches 1069; Conserv 1803 1743 1683 1863 1623 1443 2103 2043 1923 1563 1503 2283 2163 1983 854 674 614 554 494 434 374 314 254 194 134 794 734 74 14 TTCCGTCCAAAACCTGATCCTTATTGTCAAGCTAAGTATACTTTCTGTCCAACTGGCTCA 253 TCCCGGGTCTCCGGGCATCCCCTCCCGGCGCCACTGGCCGGTGCCCTACAAGCGCCTTTGAC GGACGCGCTTCCTGGTGCTGGGCGCTGGCGCTGCTTTGGCTTCGCGGTTGCTGGGGCTGG GCAGAGACATGGTTTGATTCCTACGACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAG GGCAACTGTACATTTCCCCCATCTCCGACCTGAAATGGATGCCCCCTTTCTGGTGTAATCAA 493 TGGGAATTTAAATATGGAGACCTCCTGGGACACTTGAAAATTATGCATGATGCCATTGGA 1802 TGGGAATTTAAATATGGAGACCTCCTGGGACACTTGAAAATTATGCATGATGCCATTGGA CCTATCCCAGTTATGGAGGGTGATGATGACATTGAAGTTTTTCGATTACAAGCCCCAGTA 1742 CCTATCCCAGTTATGGAGGGTGATGATGACATTGAAGTTTTTTCGATTACAAGCCCCCAGTA 313 TTCCGTCCAAAACCTGATCCTTATTGTCAAGCTAAGTATACTTTCTGTCCAACTGGCTCA AAGACTCTTGGTTTAGCCATAAAAAAGATTTTATTACCCCCTTCAAACCACATTTGCCAACT AAGACTCTTGGTTTAGCCATAAAAAGATTTTATTACCCCTTCAAACCACATTTGCCAACT TACAGTGGAGAACCTACTTATCTGGGAAATGAAACATCTGTTTTTGGGCCAACAGGAAAC TACAGTGGAGAACCTTACTCTGGGAAATGAAACATCTGTTTTTTGGGCCAACAGGAAAC TTGGCTGAATTTGGAGCAGAGTTCAAGAACATAGAAACCAACTATACAAGAATATTTCTT TTGGCTGAATTTGGAGCAGAGTTCAAGAACATAGAAAACCAACTATACAAGAATATTTCTT GCAGAGACATGGTTTGATTCCTACGACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAG GTTCAAGTAGCAACTATATCAGGAAACATGTTCAACCAAATGGCAAAGTGGGTGAAACAG GTTCAAGTAGCAACTATATCAGGAAACATGTTCAACCAAATGGCAAAGTGGGTGAAACAG GGCAACTGTACATTTCCCCCATCTCCGACCTGAAATGGATGCCCCTTTCTGGTGTAATCAA TTCAGAAGTACATTAACTGGCAAGAACTACACAATGGAATGGTATGAACTTTTCCAACTT TTCAGAAGTACATTAACTGGCAAGAACTACACAATGGAATGGTATGAACTTTTCCAACTT TCCCGGGTCTCGGGCATCCCCTCCCGGCGCCACTGGCCGGTGCCCTACAAGCGCTTTGAC Conservative 99.5%; Score 1067.8; DB 9; Pred. No. 7.7e-235; 0; Mismatches 2; Indels Length <u>.</u> Gaps 1922 18.62 433 373 1682 1502 2342 2282 2222 2162 2102 2042 1622 1562 913 853 793 723 673 613 553 193 133 73 0

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S	FEATURES SOURCE ORIGIN		TITLE JOURNAL I COMMENT	RESULT 3 LOCUS DEFINITION ACCESSION VERSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS	Qy 914 Db 2343 Qy 974 Db 2403 Qy 1034 Db 2463
	PC C12N15/00,A61K37/02,C12N5/00 CC nequals a,t,g, or c CC nequals a,	PF 18 MAR-1999 UF 2000536733 PF 19 MAR-1998 US 60/078576,19-MAR-1998 US 60/078576 PR 19 MAR-1998 US 60/078573,19-MAR-1998 US 60/078578 PR 19 MAR-1998 US 60/078579,19-MAR-1998 US 60/078578 PR 19 MAR-1998 US 60/078581,19-MAR-1998 US 60/078577 PR 19 MAR-1998 US 60/078563,19-MAR-1998 US 60/080314 PR 10 LAAR-1998 US 60/080312,01-APR-1998 US 60/080314 PR 10 LAAPR-1998 US 60/080312,01-APR-1998 US 60/080313 PI STEVEN M RUBEN, JIAN NI, CRAIG A ROSEN, GUO LIANG YU, PAUL E YOUNG, PI PING FENG, PI PING FENG, PI PING FENG, PI HIA KYAM, PI HIA KYAM, PI REINHARD EBNER, DAVID W LAFLEUR, HENRIK S OLSEN, YANGGU SHI, PAUL PC C12N15/09, A61K38/00, A61K48/00, A61P43/00, C07K14/47, C07K16/18, PC C12N1/19, C12N1/21, C12N5/10, C12P21/02, C12Q1/68, G01N33/53, G01N33/ PC	, Olsen, H.S., Shi, Y. and Moore, P.A. retory proteins 002506627-A 25 05-MAR-2002; SCIENCES INC piens (human) 506627-A/25	NA linear PAT tta; Vertebrata; Eut hini; Hominidae; Ho L., Young,P.E., Fen	AAAGAATTTCTGTTGAGTCTCTTGCAAATTTTTGATGCAGTGATTGTGCACAAACAGTTC 973

GCCACTGCCTGCTTTTTTGAGGGAATTGATGATGATGCCCCTTCAAACCAAAAAACACTTTAATAAAAAAAA	14 GGGCAGGAGGTAGACACGGCACAGGGCGCCGAGATGCCGGGGGGCGCGGCGCGCGC
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                                                                                                                                                                                                                                                                                                           AK075109 2120 bp mRNA linear PRI 03-SEP-2002 Homo sapiens cDNA FLJ90628 fis, clone PLACE1003407, highly similar to Homo sapiens putative transmembrane protein (CLN5) mRNA.
Direct Submission
Submitted (25-MAR-2002) Takao Isogai, Helix Research Institute,
Genomics Laboratory; 1532-3 Yana, Kisarazu, Chiba 292-0812, Jap
                                             2 (bases 1 to 2120)
Isogai, T. and Otsuki, T.
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Homo sapiens (human)
                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                      Homo sapiens
                                                                        Unpublished
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                                                                 GCAGAGACATGGTTTGATTCCTACGACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAG
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                                               GCAGAGACATGGTTTGATTCCTACGACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAG
                                                                                                        GÁCAATGAAACÁGGAATTTATTATGAGACATGGAATGTAAAAGCCAGCCCAGAAAAAGGGG
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Pred. No. 3.5e-234;
D; Mismatches 4;
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438

378

373

318 313 258 253 198

558 553 498 493

738

793

673 618 613

678

733

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(E-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986)
MEDO human cDNA sequencing project supported by Ministry of
Economy, Trade and Industry of Japan; cDNA full insert sequencing:
Research Association for Biotechnology; cDNA library construction:
Institute of Medical Science, University of Tokyo, Laboratory of
Genome Structure, Human Genome Center; cDNA 5'- & 3'-end one pass
sequencing and clone selection: Helix Research Institute (supported
by Japan Key Technology Center etc.).
                                    /mol_type="mRNA"
/db_xref="taxon:9600"
/clone="FLACE1003407"
/tissue type="placenta"
/clone=Tib="PLACE1"
'note="cloning vector: pME18SFL3"
                                                                                                                                                                                                                                    organism="Homo sapiens"
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4; 9;

Indels Length

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TITLE
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Best Local Similarity
Matches 640; Conserv
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Sheppard, P.O. and Gilberton, D.G.
Secreted protein which human chromosome 1:
Patent: UP 2001511345-A 12 14-AUG-2001;
ZYMOGENETICS INC
OS Artificial Sequence
PN JP 2001511345-A/12
PD 14-AUG-2001
PF 2001511345-A/12
PD 14-AUG-2001
PF 24-JUL-1998 JP 2000504249
PF 24-JUL-1997 US 60/053613
PI PAUL O SHEEPPARD, DIBRA G GILBERTON
PC C12N15/09, A61X38/00, A61X48/00, C07X14/
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CC Degenerate nucleotide sequence encoding zsig46 polypeptide CC SEQ ID NO:2 FH Key 1.038
FT source 1.038
FT forganism='Artificial Sequence'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BD073413.1 GI:22619
JP 2001511345-A/12.
synthetic construct
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           YTNTGGYTNGCNGTNGTNCCNGGNTGGWSNMGNGTNWSNGGNATHCCNWSNMGNMGNCAY
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24-JUL-1997 US 60/053613
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                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein which
                                                                                                                                                             /organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                              /organism='Artificial
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                                                                                                       71.3%; Score 772.4; DB 6; 61.7%; Pred. No. 5.2e-167; tive 232; Mismatches 165;
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                               BC025487 2318 bp www.musculus ceroid-lipofuscinosis, musculus ceroid-lipofuscinosis, maggs:5251891), partial cds.
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           GI:19343790
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Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,

Altschul, S.F., Zeeberg, B., Buctow, K.H., Schaefer, C.F., Bhat, N.K.,

Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,

Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,

Stapleton, M., Soares, M.B., Bonaldo, M.R., Casavant, T.L.,

Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,

Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,

Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,

McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,

Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,

Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,

Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,

Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,

Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,

Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,

Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,

Schmerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.

Generation and initial analysis of more than 15,000 full-length

human and mouse cDNA sequences

Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Web site: http://www.nisc.nih.gov/
Contact: nisc_mgcg.hgri.nih.gov/
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Alakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Granite,S., Guan,X., Gupte,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D.,McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                            Clone distribution: MGC clone distribution through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA Sequencing by: National Institutes of Health Intramural Sequencing Center (NISC), Gaithersburg, Maryland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tissue Procurement: Lothar Hennighausen Ph.D., Robin Hump
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLML)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (06-MAR-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                  passed the following selection criteria: Hexamer frequency ORF
                                                                                                                                                                                                                                                                                                                                                           Series: IRAK Plate: 56 Row: c Column: 7 This clone was selected for full length sequencing because it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
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                                                                      /tissue_type="Mammary tumor. old, gross tissue."
                                                                                                                                                                                                                                                                               Location/Qualifiers
                     /clone_lib="NCI_CGAP_Mam5"
/lab_host="DH10B"
                                                                                                                          /db_xref="taxon:10090"
/clone="IMAGE:5251891"
                                                                                                                                                                                                                                 organism="Mus musculus"
                                                                                                                                                                                strain="C57BL/6J"
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                                                                                                 WAP-TGF alpha model.
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                                                                                                                                                                                TTCCTACGACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAGTTGGCTGAATTTGGAGC
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                        AGAATTCAAGAAGATAGAAACCAAACTATACGAAAATATTTCTTTACAGTGGAGAGCCTAT 736
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/db_xref="LocusID:211286"
/db_xref="LocusID:211286"
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VVATTSGNTFNKVAEWVKQDNETGIYYETWTVRAGFGQGAQTWFESYDCSNFVLRTYK
KLAEFGTEFKKIETNYTKIFLYSGEPIYLGNETSIFGPKGNKTLALAIKKFYGPFRPY
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/db_xref="MGI:244225"
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/taanslation="Treathyretallalligiatiigaspisgorwpydykresprekt
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DPYCQAKYIFCPIGSPIPVMKDNDVIEVLrlQAPIWEFKYGDLIGHFKLMHDAVGFRS
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/product="Cln5_protein"
/protein_id="AAH25487.1"
/db_xref="GI:13343791"
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No. 7.2e-145;
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Malen, C., Allen, H., Albbrooks, S., Amin, A., Adams, C., Alder, J., Allen, C., Allen, H., Albbrooks, S., Amin, A., Anguiano, D., Allen, C., Allen, H., Albbrooks, S., Amin, A., Anguiano, D., Anyalabechi, W., Aoyagia, A., Aydeiji, M., Baca, B., Baden, H., Balawalo, K., Blair, J., Blankenburg, K., Blyth, P., Brown, M., Bryant, N., Bhay, C., Burch, P., Burch, P., Bursell, K., Calderon, E., Chacko, J., Chavez, D., Chen, G., Chen, R., Chen, Y., Chen, Z., Chen, Z., Chen, R., Chen, Y., Chen, Z., Ch
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HTG; HTGS_PHASE2; HTGS_DRAFT; HTGS_ENRICHED
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTTACCTACCCGACATACAACATTTACCGACTT 1009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTACCTATCAGAAACAAAACACTCTCTGGTTT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTCTTGCAAATTTTTGATGCAGTGATTGTGCACAAACAGTTCTATTTGTTTTATAATTT 990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATAAAAAATTTTATGGCCCCTTCAGACCGTATTTGTCAACCAAAGATTTTCTGATGAA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATAAAAAGATTTTATTACCCCTTCAAACCACATTTGCCAACTAAAGAATTTCTGTTGAG 930
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AUTHORS
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JOURNAL
                                                                                                                                                                     Submitted (11-OCT-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
On Oct 11, 2002 this sequence version replaced gi:21738217.
On Oct 11, 2002 this sequence version replaced gi:21738217.
On Oct 11, 2002 this sequence version replaced gi:21738217.
On Oct 11, 2002 this sequence version replaced gi:21738217.
On Oct 11, 2002 this sequence version replaced gi:21738217.
On Oct 11, 2002 this sequence reads assembled using Atlas and whole genome shotgun sequence reads assembled using Atlas in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence may extend beyond the ends of the clone and there may be sequence contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence only contigs will be indicated in the feature
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Rat Genome Sequencing Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (05-FEB-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
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Center: Baylor College of Medicine Center code: BCM
                                                                                                         Genome Center
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COMMENT

JOURNAL TITLE AUTHORS

is believed to be correct as given, however the sizes of the gaps between them are based on estimates that have provided by the submittor.
This sequence will be replaced by the finished sequence as soon as it is available and the accession number will be preserved.

1 198524: contig of 198524 bp in length. NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank draft data.html).

NOTE: This is a 'working draft' sequence. It currently consists of 1 contigs. Gaps between the contigs are represented as runs of N. The order of the pieces Assembly program: Phrap; version 0.990329
Consensus quality: 177481 bases at least Q40
Consensus quality: 17940 bases at least Q30
Consensus quality: 181141 bases at least Q20
Estimated insert size: 183954; sum-of-contigs estimation Center clone name: CH230-331D3 Quality coverage: 6x in Q20 bases; sum-of-contigs estimation

FEATURES

Location/Qualifiers

.198524

organism="Rattus norvegicus"

misc_feature

/clone="CH230-331D3" /mol_type="genomic DNA" /db_xref="taxon:10116"

-,-,-	O CTTATCTGGGAAATGAAACATCTGTTTTTGGGCCAACAGGAAACAAGACTCTTGGTTTAG 869	אצ 81 אנ 3790
	O CAGAGTTCAAGAACATAGAAACCAACTATACAAGAATATTTCTTTACAGTGGAGAACCTA 809 	λλ 75 λρ 3796
	0 ATTCCTACGACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAGTTGGCTGAATTTGGAG 749 	ථා 3802
	0 TITATTATGAGACATGGAATGTAAAAGCCAGCCCAGAAAAGGGGGCAGAGACATGGTTTG 689	<i>ኢ</i> ሃ 63 አb 3808
	0 TATCAGGAAACATGTTCAACCAAATGGCAAAGTGGGTGAAACAGGACAATGAAACAGGAA 629 	у 57 ур 3814:
	O TIGAGGAATIGAIGAIGITCACIGGAAGGAAAAIGGGACAITAGIICAAGIAGCAACIA 569	λy 51 λb 3820
	SO CCCATCICCGACCIGAAAIGGATGCCCCTTICTGGIGTAAICAAGGCGCTGCCTGCTTTT 509	ງ y 45 ວb 3826
·	90 CIGGCAAGAACTACACAAIGGAAIGGTAIGAACTITICCAACTITGCAACTGTACAITIC 449 	ງ y 39 ງ b 3832
	0 GAGACCTCCTGGGACACTTGAAAATTATGCATGATGCATTGGATTCAGAAGTACATTAA 3E9) 33
	70 AGGGTGATGACATTGAAGTTTITCGATTACAAGCCCCAGTATGGGAATTTAAATATG 329 	2 у 27 ЭБ 3844
	10 ATCCTTATTGTCAAGCTAAGTATACTTTCTGTCCAACTGGCTCACCTATCCCAGTTATGG 269 	ງ y 21 ງ b 3850
·	SO TCCCCTCCCGGCGCCACTGGCCGGGGCCCTACAAGCGCTTTGACTTCCGTCCAAAACCTG 209	2y 15
	90 GCTGGGCGCTGGCGCTGGCGGGGGGTTCCGGGGTCCCGGGTCTCGGGGA 149	Ду 9 Db 3862
	30 CGGCACAGGGCGCCGAGATGCGGGGGGGGGGGGGGGGGG	Э у 3
	ch 61.1%; Score 662.8; DB 2; Length 198524; 11 Similarity 77.0%; Pred. No. 3.4e-141; 808; Conservative 0; Mismatches 242; Indels 0; Gaps 0;	Query Mato Best Local Matches 8
	eature 197370. 1.99217 /note="clone_boundary clone_end:Sp6 site:Mbo1 end_sequence:RXAPC14TV"	misc_fe
	ar	misc_fe

	ORGANISM REFERENCE AUTHORS	ACCESSION VERSION VERSION KEYWORDS SOURCE SOURCE	RESULT AC10751	8	8 8	g &	B &
Anyalebochi, V. Aoyedi, A., Aydoldji, M., Baca, E., Baden, H., Baldwin, D., Bandaranaike, D., Barber, M., Baristead, M., Benahmed, F., Biswalo, K., Blair, J., Blankenburg, K., Blyth, P., Brown, M., Bernstead, M., Balair, J., Blankenburg, K., Blyth, P., Brown, M., Bryant, N., Buhay, C., Burch, P., Burrell, K., Calderon, E., Cardenas, V., Carter, K., Cavazos, I., Ceasar, H., Center, A., Chacko, J., Chavez, D., Chen, G., Chen, R., Chen, Y., Chen, Z., Chu, J., Chacko, J., Chavez, D., Chen, G., Chen, R., Chen, Y., Chen, Z., Chu, J., Cleveland, C., Cockrell, R., Cox, C., Coyle, M., Cree, A., D'Souza, L., Davila, M.I., Davis, C., Davy-Carroll, L., De Anda, C., Dederich, D., Delgado, O., Denson, S., Deramo, C., Ding, Y., Dinh, H., Divya, K., Draper, H., Dugan-Rocha, S., Dumn, A., Duzbin, K., Duval, B., Eaves, K., Egan, A., Escotto, M., Bugene, C., Evans, C.A., Falls, T., Fan, G., Fernandez, S., Finley, M., Flagg, N., Forbes, L., Foster, M., Foster, P., Fraser, C.M., Gabisi, A., Ganta, R., Garcia, A., Garner, T., Gazza, M., Gebregeorgis, E., Geer, K., Gill, R., Grady, M., Guerra, W., Ghusaratne, P., Haaland, W., Hamil, C., Hamilton, K., Harvey, Y., Havlak, P., Hlawes, A., Henderson, N., Hernandez, J., Harvey, Y., Havlak, P., Hawes, A., Henderson, N., Hernandez, J., Harvey, Y., Havlak, P., Hawes, A., Henderson, B., Johnson, R., Jolivet, A., Karpathy, S., Kelly, S., Kelly, S., Khan, Z., King, L., Kovar, C., Kowis, C., Kraft, C.L., Lebow, H., Levan, J., Lewis, L., Liz, Z., Liu, J., Liu, J., Liu, Y., London, P., Longacre, S., Lopez, J., Maheshwari, M., Mahindartne, M., Mahmod, M., Malloy, K., Mangum, A., Margan, M., Marris, K., Martin, R., Martinez, E., Milosavijevis, C., Miner, G., Minja, E., Montemayor, J., Moore, S., Mackenmen, E., Mortes, G., Minja, E., Montemayor, J., Moore, S., Mackenmen, C., Reilly, M., Ren, Y., Reuter, M., Reink, C., Shateman, S., Shen, H., Shetty, J., Shvartabeyn, A., Sisson, I., Sitter, C.D., Smajs, D., Shetty, J., Shorattabeyn, A., Sisson, I., Sitter, C.D., Smajs, D., Shetty, J., Shorattabeyn, A.	M Rattus norvegious Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Rattus. 1 (bases 1 to 227920) Muzny,D.Marie., Metzker,M.Lee., Abramzon,S., Adams,O.	ON RAITUB norvegicus clone CH230-138U6, *** ***, 4 unordered pieces. N AC107510 AC107510.5 GI:30580095 HTG; HTGS_PHASE1; HTGS_DRAFT; HTGS_ENRICH RAITUB norvegicus (Norway rat)	37662 CTTTACCTACCCAACATACGACATTTACCG 37633 9 0 AC107510 227920 bp DNA linear HTG	1050 CTTTACCTATCAGAAACAAAACACTCTCTG 1079	990 TIGAATATIGGITTTTAACTATGAAATTCCCTTTTATTAAATAACATATGAAGAAATCC 1049	930 GTCTCTTGCAAATTTTTGATGCAGTGATTGTGCACAAACAGTTCTATTTGTTTTTATAATT 989 	37842 CCATARARARITITACGGCCCGTCARACGGTATTCGTCARCCARATTTCTGTTGA 37783

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REFERENCE
AUTHORS
TITLE
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AUTHORS
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                                                                        source
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On May 13, 2003 this sequence version replaced gi:22855855.
The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence only contigs will be indicated in the feature
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                                                                                                                                                                                                                                                                                                                                            NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank draft data.html) NOTE: This is a 'working draft' sequence. It currently consists of 4 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence.
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Center clone name: CH220-138J6
Center clone name: CH220-138J6
Center clone name: CH220-138J6
Center clone name: Atlas 3.0;
Resembly program: Atlas 3.0;
Consensus quality: 214528 bases at least Q40
Consensus quality: 217333 bases at least Q20
Consensus quality: 219044 bases at least Q20
Estimated insert size: 223690; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Web site: http://www.hgsc.bcm.tmc.edu/Contact: hgsc-help@bcm.tmc.edu
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224739
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.er: Baylor College of Medicine
/organism="Rattus norvegicus"
/mol_type="genomic DNA"
/db_xref="taxon:10116"
                                                                                                Location
                                                                                                                  223559: contig of 223559 bp in length
223659: gap of unknown length
224738: contig of 1079 bp in length
224838: gap of unknown length
226289: contig of 1451 bp in length
226389: gap of unknown length
226389: gap of unknown length
226389: gap of unknown length
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37202 CGACGCCTGGCCCGGGAGCCACCGGGACTTCAGGGAGTCCGTGGGGCCAGGTGGAGCGC 37261
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GTCTCTTGCAAATTTTTGATGCAGTGATTGTGCACAAACAGTTCTATTTGTTTTATAATT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCCTTATTGTCAAGCTAAGTATACTTTCTGTCCAACTGGCTCACCTATCCCAGTTATGG 269
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                                                             CCATAAAAAATTTTACGGCCCCGTCAAACGGTATTCGTCAACCAAAGATTTTCTGTTGA
                                                                                                                                                                                     TTTACTTGGGAAATGAAACGTCTATTTTTGGGCCCAAAGGAAACAAGACCCTTGCTTTGG
                                                                                                                                                                                                                                                                                                                                                       CAGAGTTCAAGAACATAGAAACCAACTATACAAGAATATTTCTTTACAGTGGAAGAACCTA 809
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                                                                                                                       CCATANAAAGATTTTATTACCCCCTTCAAACCACATTTGCCAACTAAAGAATTTCTGTTGA 929
                                                                                                                                                                                                                                                   CITATCIGGGAAAIGAAACAICIGITITIGGGCCAACAGGAAACAAGACICITGGITIAG 869
                                                                                                                                                                                                                                                                                                             CAGAATTCAAGAAGATAGAAACTATATGAAAATATTTCTTTACAGCGGAGAACCGA
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74 GGACGCGTTCCTGGTGCTGGGCGCTGGCGCTGCTTTGGCTCGCGGTGTTCCGGGCTGG 133	/oz /mc /dx /dx imilarity /, Conserv GGGCAGGAGG 	PF 07-JUL-2000 JP 2000253172 PF 07-JUL-2000 JP 2000253172 PI TOSHIO OTA, TETSUO NISHIKAWA, TAKAO ISOGAI, KOJI HAYASHI, SHIZUKO PI ISHII, SHINICHI KAWAI, AI WAKAWATSU, TOMOYASU SUGIYAMA, KEIICHI NAGAI, PI SHINICHI KOJIMA, PI TETSUJI OTSUKI, HISASHI KOGA PC C12N15/09, C07K14/47, C07K16/18, C12N1/15, C12N1/19, C12N1/21, C12N5/DC C12N15/09, C07K14/47, C07K16/18, C12N1/15, C12N1/19, C12N1/21, C12N5/DC CC PC C12P21/02, C12Q1/68//C12P21/08, G06F17/30, C12N15/00, C12N5/DC CC Primer for synthesizing full-length cDNA and use thereof FH Key PC C12P21/02, C12Q1/68//C12P21/08, G06F17/30, C12N15/00, C12N5/DC CC Primer for synthesizing full-length cDNA and use thereof FH Key FT Source FT Source //organism='Homo sapiens (human)'.	mma (b kam kam ten	BD125187 Primer for synthesizing full-length cDN BD125187 BD125187.1 GI:23220132 JP 2002017375-A/618. Homo sapiens (human) Homo sapiens	38102 ATTTCITGAAAATTITTGACACAGIGATTATGCACAGAGAGTTCTACCTGTTTTATAACT 38161 990 TTGAATATTGGTTTTTACCTATGAAATTCCCTTTTATTAAAATAACA 1036
FEATURES SOURCE ORIGIN Query Matc Best Local	TITLE JOURNAL COMMENT	RESULT 11 BD126453 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	рь Оу Оу	QV QV
CINN15/09,C07K14/47,C07K16/18,C12N1/15,C12N1/19,C12N1/21,C12N5/PC 10, PC C12P21/02,C12Q1/68/C12P21/08,G06F17/30,C12N15/00,C12N5/00 CC Primer for synthesizing full-length cDNA and use thereof FH Key Location/Qualifiers 1	Primer for synthesizing full-length cDNA and use thereof Primer for synthesizing full-length cDNA and use thereof Patent: JP 2002017375-A 1884 22-JAN-2002; HELIX RESEARCH INSTITUTE OS HOMO sapiens (human) PN JP 2002017375-A/1884 PD 22-JAN-2002 PF 07-JUL-2000 JP 2000253172 PF 07-JUL-2000 JP 2000253172 PI TOSHIO OTA, TETSUO NISHIKAWA, TAKAO ISOGAI, KOJI HAYASHI, SHIZUKO PI ISHII, PI YURI KAWAI, AI WAKAWATSU, TOMOYASU SUGIYAWA, KEIICHI NAGAI, PI SHINICHI KOJIMA, PI TETSUJI OTSUKI, HISASHI KOGA		553 AGTTCAAGTACCAACITATATC-AGGAAACATGTTCAACCAAATGGC-AAAGTGGGTGAAA 610 [υ 4 υ 4 υ	314 TGGGAATTTAAATATGGAGACCTCCTGGGACACTTGAAAATTATGCATGATGCCATTGGA 373

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2 (bases 1 to 106988)

Hawkins,T.L., Reeve,M.P., Christoffersen,A., Birren,B.W.,
Fasman,K.H., Lander,E.S., McKernan,K., Munro,C., Richardson,P.,
Barna,N., Brown,K., Cooke,P., Daly,M.J., Forrest,C., Fripp,W.J.,
Gage,D., Geraigery,K., Hagos,B., Jacotot,L., Lane,M., MacKenzie,J.,
Marquis,N., McDermott,J., Moloney,N., Morrow,J., Nachman,A.,
                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 106988) Hawkins, T.L., Reeve, M.P., Christoffersen, A., Birren, Fasman, K.H. and Lander, E.S.
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Genomic sequence from Human
                                                                                                                                          Genomic sequence from Human 13
                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                   Unpublished
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                                                                                                                                                                            Christoffersen, A., Birren, B.W.,
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Submitted (29-MAY-1997) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On May 29, 1997 this sequence version replaced gi:1932720. The Staden databases, finishing information, and all chromatographic files used in the assembly of this clone are available from our anonymous ftp site.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     All repeats were identified using RepeatMasker: Smit, A.F.A. Green, P. (1996-1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html.
Location/Qualifiers
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Hawkins, T.L., Reeve, M.P., Christoffersen, A., Birren, B.W.,
Hawkins, T.L., Reeve, M.P., Christoffersen, A., Birren, B.W.,
Fasman, K.H., Lander, E.S., McKernan, K., Munro, C., Richardson, P.,
Barna, N., Chang, A., Cooke, P., Daly, M.J., Forrest, C., Fripp, W.J.,
Gage, D., Geraigery, K., Hagos, B., Jacotot, L., Lane, M., MacKenzie, J.,
Marquis, N., McDermott, J., Molney, N., Morrow, J., Nachman, A.,
Naylor, J., O'Connor, T., Peterson, K., Rollins, G., Spencer, J.,
Naylor, J., Stone, C., Strickland, C., Sydney, K., Wilmer, F. and
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Direct Submission
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                                                                           complement(8363. .8391)
/rpt family="AT_rich"
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    /rpt family="MER5B"
complement(9199. .9286)
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32099 TACTTATCTGGGAAATGAAACATCTCTTTTTTGGGCCAACAGGAAACAAGACTCTTGGTTT 868 AGCCATAAAAGATTTTATTACCCCTTCAAACCACATTTGCCAACTAAAGAATTTCTGTT 868 AGCCATAAAAAGATTTTATTACCCCCTTCAAACCACATTTGCCAACTAAAGAATTTCTGTT 928 GACTCTTGCAAATGTTTTTGATGCAGTGATTTGCAAACAGTTCTATTTGTTATAA 928 GACTCTCTGCAAATTTTTGATGCAGTGATTGTGAAACAGTTCTATTTGTTTATAA 932219 GAGTCTCTTGCAAATTTTTGATGCAGTGATTGTGAAACAGTTCTATTTGTTTATAAA 988 TTTTGAATATTGGTTTTTACCTATGAAATTTAAAATAACATATGAAGAAAT 1014 CCCTTTACCTATGAAATTTTACCTATGAAATTTAAAATAACATATGAAGAAAT 1048 CCCTTTACCTATGAAAACCAAAACACTCTCTGGTTTA 1084 1048 CCCTTTACCTATCAGAAACAAAACACTCTCTGGTTTA 1084	628 AATTTATTATGAGACATGGAATGTAAAAGCCAGCCCAGAAAAGGGGGCCAGAGACATGGTT	repeat_region complement(5475554782) /rpt_family="(CA)n" Query Match Best Local Similarity 99.4%; Pred. No. 1.3e-106; Matches 514; Conservative 0; Mismatches 3.1 Indels 0; Gaps 0; Soy 568 TATATCAGGAAACATGTTCAACCAAATGGCAAAGTGGTGAAACAGGACAATGAAACAGG 627 Db 31859 TAAACTAGGAAACATGTTCAACCAAATGGCAAAGTGGAACAGACAACAGACAAAGG 31918	region complement region /rpt family region /spt family region 50952 .511 region /rpt family region /rpt family region /rpt family region 53772 .538 /rpt family region 54725 .541 region /rpt family region /rpt family region /rpt family	region 43253. 4: region /rpt fami region complement region complement region complement region complement region complement region complement region /rpt fami region /rpt fami region /rpt fami

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Submitted (10-JUL-2001) Sanger Centre, Hinxton, Cambridgeshire,
Submitted (10-JUL-2001) Sanger Centre, Hinxton, Cambridgeshire,
CB10 15A, UK. E-mail enquiries: humquery@sanger.ac.uk Clone
requests: clonerequest@sanger.ac.uk
On Sep 8, 2000 this sequence version replaced gi:6982057.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Assembly program: XGAP4; version 4.5 Sequencing vector: plasmid; L08752; 100% of reads Chemistry: Dye-terminator Big Dye; 100% of reads Consensus quality: 162085 bases at least Q40 Consensus quality: 164521 bases at least Q30 Consensus quality: 166040 bases at least Q20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Insert size: 168062; sum-of-contigs
Insert size: 164996; 1.7% error; agarose-fp
Quality coverage: 4.08x in Q20 bases; sum-of-contigs Quality
coverage: 4.16x in Q20 bases; agarose-fp
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Web site: http://www.sanger.ac.uk
Contact: humquery@sanger.ac.uk
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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AL136440.2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   as soon as it is available and the accession number will be preserved.
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clone_lib="RPCI-11.1"
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Pred. No. 1.5e-106;
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Sequencing vector: plasmid; L08752; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Consensus quality: 220597 bases at least Q40
Consensus quality: 234299 bases at least Q30
Consensus quality: 241103 bases at least Q30
Consensus quality: 241103 bases at least Q20
Insert size: 245987; sum-of-contigs
Insert size: 245987; sum-of-contigs
Quality coverage: 2.52x in Q20 bases; sum-of-contigs
coverage: 3.92x in Q20 bases; agarose-fp
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AL359875
AL359875.3 GI:9864226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (12-JUN-2001) Sanger Centre, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk
On Aug 22, 2000 this sequence version replaced gi:8894433.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Center project name: bA453N22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Center: Sanger Centre
Center code: SC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryola; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: humquery@sanger.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Web site:
                                                                                                                  arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                   NOTE: This is a 'working draft' sequence. It currently consists of 53 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TACTTATCTGGGAAATGAAACATCTGTTTTTGGGCCAACAGGAAACAAGACTCTTGGTTT
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HTGS_PHASE1; HTGS_CANCELLED
sapiens (human)
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22, 53 unordered pieces.
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37750. .
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fragment_chain:1"
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fragment_chain:4"
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Tragment_chain:3"
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2510: contig of 2483 bp in length
2710: gap of 100 bp
4942: contig of 2232 bp in length
5042: gap of 100 bp
5058: contig of 5916 bp in length
1058: gap of 100 bp
1187: contig of 10129 bp in length
1187: contig of 10129 bp in length.
1187: contig of 10129 bp in length.
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of 100 bp
g of 4006 bp in length
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BD060465
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                                            Jacobs K., McCoy,J.M., Lavallie,E.R., Racie,L.A., Me
Treacy,M., Spaulding,V. and Agostino,M.J.
Secreted expressed sequence tags (EBSTS)
Patent: JP 2001518793-A 825 16-OCT-2001;
GENETICS INSTITUTE INC
PN JP 2001518793-A/825
PD 16-OCT-2001
PF 10-APR-1998 JP 1998543070
PR 10-APR-1997 US 08/837312
PI KENNETH JACOBS,JOHN M MCCOY,EDWARD R LAVALLIE,L
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PI MAURICE TREACY, VIKKI SPAULDING, MICHAEL J AGOSTINO PC C12N15/12, C12N5/10, C07K14/47, C12Q1/68, A61K38/17 CC Strai
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                                              JP 2001518793-A/825
16-OCT-2001
10-APR-1998 JP 1998543070
10-APR-1997 US 08/837312
KENNETH JACOBS, JOHN M MCCOY, EDWARD R LAVALLIE, LISA A
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Search completed: April 22, 2004, 02:57:20 Job time : 4425.69 secs
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                                                                 ACTCTTGGTTTAGCCATAAAAAGATTTTATTACCCCTTCAAAC 899
                                                                                                                 AGTGGAGAACCTACTTATCTGGGAAATGAAACATCTGTTTTTGGGCCAACAGGAAACAAG 856
                                                                                                    AGTGGAGAACCTACTTATCTGGGAAATGAAACATCTGTTTTTGGGCCAACAGGAAACAAG 458
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Location/Qualifiers
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Result
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Maximum Match 100%
Listing first 45 summaries
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   864.8
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Copyright (c) 1993 - 2004 Compugen Ltd.
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BX331615 BX331615
BX342662 BX342662
AL571805 AL571805
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0852 M	852	AK030	11	3269	39.8	77.	45	
X757396 E	o	~	13	915	40.0	379.2	44	Ω
1053 AJ		AJ4510	9	767	0	80.	43	
BU633296 UI-H-FL1-	296	BU63329	13	825	40.3	38	42	Ω
04716	716	BI304	12	465	0	•	41	
34042	042	BY734	13	661	0	85.	40	
19558	558	BG619	12	791	\vdash	39	39	
82103	103	BI082	12	854	N	99.	38	
AV723592 AV723592	92	AV7235	9	484	4	•	37	
241	176	CF724	14	690	4	23.	36	
038		AU2803	9	565	G	N	35	
740661	561	BM740661	12	633	45.4	w	34	
4556	600	CB455	14	516	S	ω	33	
F7398	857	BF739	10	706	S	٠	32	C
W5942	284	AW594	10	599	σ	٠	31	O
Q4174	448	BQ417	13	623	J	٠	30	
I4562	284	BI456	12	853	œ	٠	29	
82240	240	BI182:	12	796	æ	٠	28	
8221	221	CK128	14	833	Θ	•	27	
34549	549	BI734	12	872	Θ	468.8	26	
6421	421	BI156	12	828	0	•	25	
9262	262	BM849	12	607	0	475	24	
AW475730 un71c09.y	730	AW475730	10	777	н	489.4	23	
09525	525	AQ309	28	607	N	50	22	a
26170	170	BQ926	13	938	ω	6.	21	
BG820113 602782325	113	BG820113	12	676	ω	507.8	20	
19385	385	BQ919:	13	974	S.	22.	19	
43453	153	BQ443	13	755	7	42.	18	
97292 12B22045	292	CB297:	14	564	7	46.	17	
60287673	303	BI080:	12	915	œ	50.	16	
82158	158	BF982	10	1098	9	62	15	
15456 NISC np0	156	CB215	14	641	63.3	600	14	
BI223533 602941923	533	BI223	12	787	ü	თ	13	
90566 60285567	566	BI090	12	869	٥,	29	12	
88543 AGENCOUR	543	CA488	14	924	67.8	43.	11	
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32293 Mus mus	9	32	11	2247	٥.	83	9	
85741 Mus n		28	11	2433	0	70.	œ	
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Mus musc		u	11	2356		71.	σ	
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ALIGNMENTS

REFERENCE AUTHORS TITLE JOURNAL COMMENT RESULT 1 AL546472 LOCUS SOURCE ORGANISM VERSION KEYWORDS ACCESSION DEFINITION Contact: Genoscope
Genoscope - Centre National de Sequencage
Bp 191 91006 EVRY cedex - France
Bmail: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238.f
more information about this cluster, see
http://www.genoscope.cns.fr/
cni_his/cni_ster_calesc_continuorenion1651018167=7238 f
Contact 1 (bases 1 to 1201)
Li,W.B., Gruber,C., dessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished (2001)
On Feb 15, 2001 this sequence version replaced AL546472 1201 bp mRNA linear EST 31-MAY-2003 AL546472 Homo sapiens PLACENTA COT 25-NORMALIZED Homo sapiens CDNA Clone CSODI030YJ01 5-PRIME, mRNA sequence. AL546472 cgi-bin/cluster.cgi?seq=CSODIO3OCEO1QP1&cluster=7238.f. Contact Feng Liang Email : fliang@lifetech.com URL : Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. Homo sapiens Homo sapiens (human) AL546472.2 GI:31268306 gi:12879620 EST 31-MAY-2003

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                                                                                                                                                                                                                                                                                                                                                                                             AACTGTACATTTCCCCATCTCCGACCTGAAATGGATGCCCCTTTCTGGTGTAATCAAGGC 350
                                          ACTCTTGGTTTAGCCATAAAAAGATTTTATTACCCCTTCAAACCACATTTGCCAACTAAA 730
                                                                                               AGTGGAGAACCTACTTATCTGGGAAATGAAACATCTGTTTTTGGGCCAACAGGAAACAAG 720
                                                                                                                                                            GCTGAATTTGGAGCAGAGTTCAAGAACATAGAAACCAACTATACAAGAATATTTCTTTAC
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GAATTTCTGTTGAGTCTCTTGCAAATTTTTTGATGCAGTGATTGTGCACAAACAGTTCTAT 840
                                                                                 AGTGGAGAACCTACTTATCTGGGAAATGAAACATCTGTTTTTKGGGCAACAGGAAACAAG
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Location/Qualifiers
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/mol_type="mRNA"
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95.4%;
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Pred. No. 6.
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TITLE
JOURNAL
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1 (bases 1 to 923)

Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Full-Length cDNA libraries and normalization

Unpublished (2001)
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BX331615 Homo sapiens NEUROBLASTOMA COT 10-NORMALIZED Homo sapiens 
CDNA clone CSODB009YCO1 5-PRIME, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238.f For
more information about this cluster, see
http://www.genoscope.cns.fr/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cgi-bin/cluster.cgi?seq=CSODB009AB01QP1&cluster=7238.f. Contact Feng Liang Email : fliang@lifetech.com URL : http://fulllength.invitrogen.com/ InVitrogen Corporation 1600
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BP 191 91006 EVRY cedex - France
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Location/Qualifiers
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                GAATTTAAATATGGAGACCTCCTGGGACACTTGAAAATTATGCATGATGCCATTGGATTC
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                                                                                                                                                                CGTCCAAAACCTGATCCTTATTGTCAAGCTAAGTATACTTTCTGTCCAACTGGCTCACCT
                                                                                                                                                                                                       CGTCCAAAACCTGATCCTTATTGTCAAGCTAAGTATACTTTCTGTCCAACTGGCTCACCT
                                                                                                                                                                                                                                                                                           CGGGTCTCGGGCATCCCCTCCCGGCGCCACTGGCCGGTGCCCTACAAGCGCTTTGACTTC
GAATTTAAATATGGAGACCTCCTGGGACACTTGAAAATTATGNATGNTGNCATTGGATTC
                                                                                ATCCCAGTTATGGAGGGTGATGATGACATTGAAGTTTTTCGATTACAAGCCCCCAGTATGG
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                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue type="NEUROBLASTOMA COT 10-NORMALIZED" /clone_Iib="Homo sapiens NEUROBLASTOMA COT 10-NORMALIZED" /note="Ist strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:9606"
/clone="CS0DB009YC01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Homo sapiens"
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Pred. No. 1.2e-146;
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Genoscope - Centre National de Sequencage BP 191 9106 EVRY cedex - France Email: seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr Library was constructed by Life Technologies, a division of Invitrogen. This sequence belongs to sequence cluster 7238.f For more information about this cluster, see http://www.genoscope.cns.fr/ cgi-bin/cluster.cgi?seq=CSODL004CH02QPl&cluster=7238.f. Contact : Feng Liang Email: fliang@lifetech.com URL: http://fulllength.invitrogen.com/ InVitroGen Corporation 1600 Faraday Avenue Genoscope sequence ID : CSODL004CH02QPl. 1. 1077 /coation/Qualifiers source /organism="Homo sapiens" /clone="CSODL004Y03" /clone="CSODL004Y03" /cll type="B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED" /cell line="RAMOS CELL LINE) COT 25-NORMALIZED" /conte="Ist strand cDNA was primed with a NotI-oligo(dT)	iomo sapiens B CELLS o ens cDNA clone CSODLOO (C) GI:30338103 ens (human) ens (human) ens (human) for there's, Primates, C Eutheria, Primates, C Eutheria, Primates, C Eutheria, Primates, C Eutheria, Primates, C 1 to 1077) 3ruber, C., Jessee, J. a ch cDNA libraries and ed (2001)	## ANTGANACAGGANTTATTATGAGACATGGANTGTANAAGCCAGCCCAGAANAGGGGCA 540	241 AGAAGTACATTAACTGGCAAGAACTACACAATGGAATGG
Qy 661 AGTGAGACCTACTTATCTGGGAAAACATACAAAAATATTTCTTTWY 865 Qy 661 AGTGGAGAACCTACTTATCTGGGAAACATCACTTTTTGGGCCAACAGGAAACAAG 720	361 GCTGCCTGCTTTTTTGAGGGAATTGATGATGATGATGAAGAAAATGGGACATTAGTT	Oy 121 ATCCCAGTTATGGAGGGTGATGATGATTTTTCGATTACAAGCCCCAGTATGG 180	primex. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSFORT 6 vector. Library was normalized." ORIGIN ORIGIN 72.1%; Score 683.6; DB 13; Length 1077; Best Local Similarity 88.8%; Pred. No. 8.8e-145; Matches 700; Conservative 49; Mismatches 34; Indels 5; Gaps 2; OY 1 CGGGTCTCGGGCATCCCTCCCGGCGCACTGGCCGTGCCCTACAAGCGCTTTGACTTC 60 Db 206 CGGGTCTCGGGCATCCCTTCCCGGCGCCCACTGGCCCTACAAGCGCTTTGACTTC 265 OY 61 CGTCCAAAACCTGATCCTTATTGTCAAGCTAAGTATACTTTCTGTCCAACTGGCTCACCT 120 Db 266 CGTCCAAAACCTGATCCTTATTGTCAAGCTAAGTATACTTTCTGTCCAACTGGCTCACCT 325

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ve prime end enriched, double-strand cDNA was ith Not I and cloned into the Not I and EcoR V. he pCMVSPORT 6 vector. Library was normalized."
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Pred. No. 8.8e-145;
9; Mismatches 34;
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Best Local :
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Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238.f
more information about this cluster, see
http://www.genoscope.cns.fr/
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1 (bases 1 to 1201)

Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Full-length cDNA libraries and normalization

Unpublished (2001)

On Feb 16, 2001 this sequence version replaced gi:12929467.
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                                                                    ATATTTCTTTACAGTGGAGAACCTACTTATCTGGGAAATGAAACATCTGTTTTTGGGCCA
                                                                                                               TTTAACAAGTTGGCTGAATTTGGAGCAGAGTTCAAGAACATAGAAACCAACTATACAAGA
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/clone_lib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/note="Ist strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
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/db_xref="taxon:9606"
/clone="CS0DI030YJ01"
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97.8%;
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Pred. No. 1.2e-142;
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NIH-MGC http://mgc.nci.nih.gov/
National Institutes of Health, |
Unpublished (1999)
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Tissue Procurement: ATCC
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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CAAGAACTACAATGGAATGGTATGAACTTTTCCAACTTGGCAACTGTACATTTCCCCA
                     CAAGAACTACACAATGGAATGGTATGAACTTTTCCAACTTGGCAACTGTACATTTCCCCA 317
                                                                                               CCTCCTGGGACACTTGAAAATTATGCATGATGCCATTGGATTCAGAAGTACATTAACTGG
                                                                                                                                         TGATGATGACATTGAAGTTTTTCGATTACAAGCCCCAGTATGGGAATTTAAATATGGAGA
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                                                                                                                                                                                                                                                                                                  /tissue type="adenocarcinoma"
/lab_host="DH10B (phage-resistant)"
/clone lib="NIH_MGC_65"
/note="Organ: colon; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo draverage insert size 1.8 kb. Library constructed by Lii Technologies. "
                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
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93.0%;
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         Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                   Mus musculus
Mus musculus
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AKO43247

Mus musculus 7 days neonate cerebellum cDNA, RIKEN full-length enriched library, clone:A730075N08 product:similar to CEROID-LIPOPUSCINOSIS NEURONAL PROTEIN 5 (CLN5 PROTEIN) [Homo
                                                                                                                                         Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
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                                                                                                                                                                                                                       /mol_type="mRNA"
/strain="C57BL/6J"
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 Score
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Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Sueniro-Cho, Tsurumi-ku, Yokohama Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, URL:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Adachi J., Aizawa K., Akimura, T., Arakawa, T., Bono, H., Carninci, P. Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozane, T., Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T., Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Kondo, S., Konno, H., Kouda, M., Makamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M., and Hayashizaki, Y.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Division of Experimental Animal Research in Riken contributed to prepare mouse tissues.
Please visit our web site for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Group Phase I & II Team.

Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length CDWAs

Nature 420, 563-573 (2002)

6 (Dases 1 to 2356)

Adaphi I hissar Altmura T Arabana T Born H Carningi D
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             URL:http://genome.gsc.riken.go.jp/
URL:http://fantom.gsc.riken.go.jp/.
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                                                                                                                                                                             /db_xref="FANTOM DB:A730075N08"
/db_xref="MGI:2408405"
/db_xref="MGI:2408405"
/db xref="taxon:10090"
/clone="A730075N08"
/clone=tppe="cerebellum"
/clssue_type="cerebellum"
/clone_lb="RIKEN_full-length_enriched_mouse_cDNA_library"
/dev_stage="7_days_neonate"
/note="similar to CEROID-LIPOFUSCINOSIS NEURONAL (CLN5 PROTEIN) [Homo sapiens] (SWISSPROT|O75503, FASTY, 73.9%ID, 86.7%length, match=1041)"
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UI-H-FL1-bgb-i-07-0-UI.s1 NCI_CGAP_FL1 Homo sapiens
UI-H-FL1-bgb-i-07-0-UI 3', mRNA sequence.
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                                                                                                                                                   TACGAAGAAACCCCGTTACCTACCCGACATACAACATTTACCGACTT 1076
                                                                                                                                                                                                                                        TIGITITATIAACTITGAGTATTGGTTTCTACCAATGAAACCCCCCTTTGTCAAAATAACA
                                                                                                                                                                                                                                                                                                                                                               GAATTTCTGTTGAGTCTCTTGCAAATTTTTGATGCAGTGATTGTGCACAAACAGTTCTAT 840
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0; Mismatches 172;
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Best Local Similarity
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                                                                                                                                                                                                                  294 ACTTGGCAACTGTACATTTCCCCCATCTCCGACCTGAAATGGATGCCCCCTTTCTGGTGTAA 353
                                                                                                                                                                                                                                                                                                     234 TGGATTCAGAAGTACATTAACTGGCAAGAACTACACAATGGAATGGTATGAACTTTTCCA
                                                                                                                                                                                                                                                                                                                                                                   673;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1997)
Contact: Robert Strausberg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1. (Dases 1 to 689)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Seq primer: M13 FORWARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cgapbs-r@mail.nih.gov
Tissue Procurement: James Martin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy
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                                                 ATTAGTTCAAGTAGCAACTATATCAGGAAACATGTTCAACCAAATGGCAAAGTGGGTGAA
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                                                                                                           ACTTGGCAACTGTACATTTCCCCCATCTCCGACCTGAAATGGATGCCCCCTTTCTGGTGTAA
                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (Pharmacial with a modified polylinker; Site 1: ECOR I;
Site 2: Not I; NCI CGAP FLI is a normalized cDNA library
derived from a pool of mRNA obtained from 4 cell lines
from grade III chondrosarcoma tissues. The library was
constructed according to Bonaldo, Lennon and Soares,
Genome Research, 6:791-806, 1996. First strand cDNA,
synthesis was primed with an oligo-dT primer containing a
Not I site. Double stranded cDNA was ligated to an EcoR I
adaptor, digested with Not I, and cloned directionally
into pTT3-Pac vector. The oligonuclectide used to prime
the synthesis of first-strand cDNA contains a library tag
sequence that is located between the Not I site and the
(dT)18 tail. The sequence tag for this library is
GAGGTCGGTG. The cell lines were provided by Dr. James
Martin from the University of Iowa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens (human)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /dev stage="Adult"
/lab_host="DH10B (Life Technologies)"
/clone lib="NCI CGAP FLI"
/ncte="Organ: Chondrosarcoma, Vector: pT7T3-Pac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rag_seq=gaggtcggtg"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="UI-H-FL1-bgb-i-07-0-UI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tissue_type="Cell lines"
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Pred. No. 8.3e-142;
0; Mismatches 4;
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              Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sagaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsunoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                            Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                         Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
99279253
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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6 (bases 1 to 2433)
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81.7%;
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Direct Submission
Submitted (16-APR-2002) Yoshihide Hayashizaki, The Institute of Submitted (16-APR-2002) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute, 1-7-22 Suehiro-cho, Teurumi-ku, Yokoham Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, URL:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Adachi J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P. Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozane, T., Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T., Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nakamura, M., Mishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagama, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takada, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Group Phase I & II Team.
Analysis of the mouse transcriptome based of 60,770 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         URL:http://genome.gsc.riken.go.jp/
URL:http://fantom.gsc.riken.go.jp/
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               prepare mouse tissues.
Please visit our web site for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The FANTOM Consortium and the RIKEN
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                                             CGTCCAAAACCTGATCCTTATTGTCAAGCTAAGTATACTTTCTGTCCAACTGGCTCACCT 120
                                                                                                                                               CTGGGCGTCCCCGACGTCTGGGCAACGCTGGCCGGTGCCCTACAAGCGCTTCTCTTTC
                                                                                                                                                                                                                   CGGGTCTCGGGCATCCCCTCCCGGCGCCACTGGCCGGTGCCCTACAAGCGCTTTGACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="similar to CEROID-LIPOFUSCINOSIS NEURONAL (CLN5 PROTEIN) [Homo sapiens] (SWISSPROT|075503, PASTY, 73.9%ID, 86.7%length, match=1041)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="FANTOM_DB:D730033P03"
/db_xref="MGI:2422937"
/db_xref="HXXXXI:10090"
/clone="D730033P03"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sex="rema.e"
"tissue type="mammary gland"
(clone_Tib="RIKEN full-length enriched mouse cDNA library"
(clone_Tib=""IA Avvs lactation, adult"
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strain="C57BL/6J"
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Pred. No. 8.9e-142;
0; Mismatches 173;
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                                                                                                                                                              AK032293.1 GI:26328112
HTC; CAP trapper.
Mus musculus (house mouse)
Carninci, P. and
High-efficiency
                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                            Mus musculus
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Hayashizaki,Y.
full-length c
                                                                                Chordata;
Rodentia;
  cDNA cloning
                                                                                Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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26 (bases 1 to 2247)

27 Adachi J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Adachi J., Aizawa, K., Akimura, T., Hara, A., Hashizume, W., Fukuda, S., Furumo, M., Hanagaki, T., Haraoka, T., Hirooka, T., Hirooka, T., Hirooka, T., Hirooka, T., Hirooka, T., Kasukawa, T., Kasukawa, T., Kochima, Y., Itoh, M., Kagawa, I., Kasukawa, T., Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Sakazume, N., Okazaki, Y., Saito, R., Saito, H., Sakai, C., Sakai, X., Sakazume, N., Okazaki, Y., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagama, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomazu, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y. Direct Submission

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokoha RIKEN 30-0045, Japan (E-mail:genome-resegec.riken.go.jp, Richard 230-0045, Japan (E-mail:genome-resegec.riken.go.jp,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Group Phase I & II Team.
Analysis of the mouse transcriptome of 60,770 full-length cDNAs
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                                                                                                                                                                                                                                                        Please visit our web site for further URL:http://genome.gac.riken.go.jp/URL:http://fantom.gac.riken.go.jp/.
                                                                                                                                                                                                                                                                                                                                                                   CDNA library was prepared and sequenced in Mouse Genome
Encyclopedia Project of Genome Exploration Research Group in Ri
Genomic Sciences Center and Genome Science Laboratory in RIKEN.
Division of Experimental Animal Research in Riken contributed t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     URL: http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
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                                               /db_xref="FANTOM_DB:6430516P20"
/db_xref="MGI:2395762"
                                                                                                                                         organism="Mus musculus"

/mol_type="mRNA"
                                                                                                                 /strain="C57BL/6J"
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, 685-690 (2001)
                             _xref="taxon:10090"
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ACTCTTGGTTTAGCCATAAAAAGATTTTATTACCCCTTCAAACCACATTTGCCAACTAAA
                                                                         AGTGGAGAACCTACTTATCTGGGAAATGAAACATCTGTTTTTGGGCCAACAGGAAAACAAG
                                                                                                                                              GCTGAATTTGGAGCAGAGTTCAAGAACATAGAAACCAACTATACAAGAATATTTCTTTAC
                                                                                                                                                                                                                                                                                      AATGAAACTGGGATTTATTATGAGACATGGACGGTCCGAGCCGGCCCAGGACAAGGGGCC
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                                      AGTGGAĞAĞCCTATTTACCTGGĞAAATĞAAACATCTATTTTGGĞCCCCAAAĞGAAACAAĞ
                                                                                                                        GCTGAATTTGGAACAGAATTCAAGAAGATAGAAACAAACTATACGAAAATATTTCTTTAC
                                                                                                                                                                                                      CAGACGTGGTTCGAGTCCTACGACTGTTCGAATTTTGTCTTAAGGACATATAAGAAATTG
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/db_xref="G1:26328113"
/db_xref="G1:26328113"
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/translation="LGLATILGASPTSGQRWPVPYKHFSFRPKTDPYCQAKYTFCPTG
SPIPVMKDNDVIEVLRLQAPIWEFKYGDLLGHFKLMHDAVGFRSTLTGKNYTIEWYBL
FQLGNCTFPHLRPDKSAPFWCNQGAACFFEGIDDKHWENGTLSVVATISGNTENKVA
EWVKQDNETGIYYETWTVRAGPGQGAQTWFESYDCSNFVLRTYKKLAEFGTEFKKIET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="unnamed protein product; putative similar to CEROID-LIPOFUSCINOSIS NEURONAL PROTEIN 5 PROTEIN) [Homo sapiens] (SWISSPROT[075503, evidence: FASTY, 73.9 %ID, 86.7 %length, match=1041) "
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/tissue type="olfactory brain"
/clone_Tib="RIKEN full-length enriched mouse
/dev_stage="adult"
<1. _971
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DTV I I HRQFYLFYNFEYWFL PMKP PFVKI TYEETPL PTRHTTFTDL "
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                                                                                                  Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Kristi A. Egland, Ira Pastan
cDNA Library Preparation: Invitrogen Corp
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llni.gov
plate: LLAM14279 row: j column: 21
                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 924)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
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CA488543.1 GI:24950702
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                                                                                    quality sequence stop: 637.
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6720309"
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765 660 600 645 540 585 480 525 420 360

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465

705

mRNA linear EST 20-JUN-2001 s cDNA clone IMAGE:4996891 5',

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Query Match
Best Local Similarity 96.0
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CGGGTCTCGGGCATCCCCTCCCGGCGCCCACTGGCCGGTGCCCTACAAGCGCTTTGACTTC 60
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Subtracted with brain, liver, lung, kidney and muscle.
Directionally cloned. Priming method: oligo-dT. Average
insert size: 1800 bp. Library amplification: 26,000 fold.
Kristi A. Egland, James J. Vincent, Robert Strausberg,
Bungkook Lee & Ira Pastan: Discovery of new breast
cancer genes encoding membrane and secreted proteins.
Manuscript submitted."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /cell_line="ZR-75-1, MCF7, SK-BR-3, MDA-MB-231,
hTERT-HME1, LNCap"
/lab host="EMDH108"
/clone_lib="MAPcL"
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Pred. No. 1.3e-135;
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NIH-WCC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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Location/Qualifiers
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Plate: LLAM11023 row: a column: 20
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Tissue Procurement: ATCC
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1999)
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                                                     CAAGTAGCAACTATATCAGGAAACATGTTCAACCAAATGGCAAAGTGGGTGAAACAGGAC
                                                                                                                                                        AACTGTACATTTCCCCCATCTCCGACCTGAAATGGATGCCCCCTTTCTGGTGTAATCAAGGC
                                                                                                                                                                                                         GAATTTAAATATGGAGACCTCCTGGGACACTTGAAAATTATGCATGATGCCATTGGATTC
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AACTGTACATTTCCCCATCTCCGACCTGAAATGGATGCCCCCTTTCTGGTGTAATCAAGGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/mol type="maRNA"
/db_xref="taxon:9606"
/clone="IYMAGE:4996891"
/cell_line="MGC36"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="Organ: cervix; Vector: pCMV-SPORT6; Site_1: NotI; Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.5 kb. Library prepared by Life Technologies."
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CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: Incyte Genomics, Inc. DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information found through the I.M.A.G.B. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 787)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
Unpublished (1999)
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Location/Qualifiers
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                             CGTCCAAAACCTGATCCTTATTGTCAAGCTAAGTATACTTTCTGTCCAACTGGCTCACCT 120
                                                                                    CGGGTCTCGGGCATCCCCTCCCGGCGCGCCACTGGCCGGTGCCCTACAAGCGCTTTGACTTC 175
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                                                                                                                                                                                                                                                                              /clone_lib="NIH_MGC_12"
/note="Organ: cervix; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidixectionally. Primer: Oligo dT.
Average insert size 1.4 kb. Library prepared by Life
Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5105093"
                                                                                                                                                                                                                                                                                                                                                                                           tissue_type="cervical carcinoma cell
lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Homo sapiens"
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Pred. No. 5.1e-126;
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                                                                                 cDNA Library Preparation:

cDNA Library Arrayed by: The I.M.A.G.E. Consortium/LLNL

DNA Sequencing by: National Institutes of Health Intram.

Sequencing Center (NISC)

Clone distribution: NCI-GAP clone distribution informat
                                                                                                                                            Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 641)

NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
NCI-CGAP lancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                          5', mRNA sequence. CB215456
CB215456 CB215456.1 GI:28263648
                                                                                                                                                                                                                                                                                                                   CB215456 641 NISC_np06c07.y1 NICHD_HS_Ut1 5', mRNA sequence.
                                                                                                                                                                                                                                                                                   EST
                                                  info@image.llnl.gov
Plate: LLAM13163 x
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                                                                        found through the I.M.A.G.E. Consortium/LINL
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  /organism="Homo sapiens"
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                                                                      mRNA sequence.
BF982158
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                           BF982158.1
                                                                                             602308976F1 NIH MGC 88 Homo sapiens
                                                                                                           BF982158
                         Homo sapiens
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                                      sapiens
                                      (human)
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GAGACATGGTTTGATTCCTACGACTGTTCCAAATTTGTGTTTAAGGACCTTTTAACAAGTTG
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                                                                                     AATGAAACAGGAATTTATTATGAGACATGGAATGTAAAAGCCCAGCCCAGAAAAGGGGGGCA
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phase, Cycle day 13"
/lab_host="DH10B (T1-resistant)"
/clone lib="NICHB HS Utl"
/clone lib="NICHB HS Utl"
/note="Organ: uterus; Vector: pCMV-SPORT6.1.ccdb (ResGen, Invitrogen Corporation); Site_1: NotI; Site_2: ECORV; Cloned unidirectionally from microquantity amounts of mRNA from normal endometrial tissue (late proliferative phase, cycle day 13). Average insert size 1.9 kb. Library constructed by ResGen (Invitrogen Corporation)."
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/db_xref="taxon:9606"
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Pred. No.
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1098 bp

mRNA linear EST 23-JI cDNA clone IMAGE:4400298

EST 23-JAN-2001

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Best Local Similarity 88.2%;
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can ?
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM10105 row: 9 column: 19
High quality sequence stop: 693.
Location/Qualifiers
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                              AATGAAACAGGAATTTATTCTGAGACCTGGCCTGTCACAGCCAG-CCAGAACACGGGGCA
                                                                                                       AATGAAACAGGAATTTATTATGAGACATGGAATGTAAAAGCCAAGCCCAGAAAAGGGGGGCA 540
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/clone="MAGE: 4400298"
/tissue_type="duodenal adenocarcinoma, cell line"
/lab host="PHIOB (phage-resistant)"
/clone_lib="NIH_MGC_88"
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/note="Organ: small_intestine; Vector: pCMV-SPORT6;
Site_1: Not1; Site_2: Sal1; Cloned unidirectionally;
oligo-dT primed. Average insert size 1.767 kb. Library
enriched for full-length clones and constructed by Life
Technologies. Note: this is a NIH_MGC Library."
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/mol_type="mRNA"
/db_xref="taxon:9606"
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Pred. No. 2.9e-117;
0; Mismatches 76;
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                                                   GGGGGAAACTAGTCTTTGGCGCGATGTCACA--
CCCCTCGGTTCTTCCTCAAAGAGAATTT
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                                                                                                                           GCTGAATTTGGAGCAGAGTTCAAGAACATAGAAACCCAACTATACAAGAATATTTCTTTAC
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                                                                 AGTGGAGAACCTACTTATCTGGGAAATGAAACATCTGTTTTTGGGCCAACAGGAAACAAG
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                                               - CTGGTGTTCGGGGCACCGGGAACCCG
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Search completed: April 22, 2004, 04:39:48
Job time: 2858.76 secs

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CURRENT APPLICATION NUMBER: US/10/653,595
CURRENT FILING DATE: 2003-09-03
PRIOR APPLICATION NUMBER: US/97945
PRIOR FILING DATE: 1999-09-17
PRIOR APPLICATION NUMBER: PCT/US99/05804
PRIOR APPLICATION NUMBER: PCT/US99/05804
PRIOR APPLICATION NUMBER: 60/078,566
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,576
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,573
PRIOR PILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,574
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,579
PRIOR APPLICATION NUMBER: 60/078,579
PRIOR APPLICATION NUMBER: 60/080,314
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US-10-653-595-26
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                                                                                                                  Remaining Prior Application data removed
NUMBER OF SEQ ID NOS: 470
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 26
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Publication No. US20040048304A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Ruben et. al.
TITLE OF INVENTION: 95 Human secreted proteins
FILE REFERENCE: PZ027P1C1
                              FEATURE:
NAME/KEY: SITE
     LOCATION: (1520)
OTHER INFORMATION: n equals a,t,g,
                                                                   ORGANISM: Homo sapiens
                                                                                   LENGTH: 1751
TYPE: DNA
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RESULT 4
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SEQ ID NO 26
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      FEATURE:
NAME/KEY: SITE
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OTHER INFORMATION: r
NAME/KEY: SITE
LOCATION: (1557)
                                                                                                                                                                                              PRIOR
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PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,576
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,573
PRIOR FILING DATE: 1998-03-19
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PRIOR FILING DATE: 1998-04-01
NUMBER OF SEQ ID NOS: 470
SOFTWARE: Patentin Ver. 2.0
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PRIOR APPLICATION NUMBER: PCT/US99/05804
PRIOR FILING DATE: 1999-03-18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Human Genome Sciences, Inc. et al. TITLE OF INVENTION: 95 Human secreted proteins
                                                                                                 LENGTH: 1751
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                      FILING DATE: 1998-03-19
APPLICATION NUMBER: 60/078,577
FILING DATE: 1998-03-19
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APPLICATION NUMBER: 60/080,312
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FILING DATE: 1998-03-19
APPLICATION NUMBER: 60/078,579
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Best Local Similarity
Matches 1067; Conserv
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NAME/KEY: SITE
LOCATION: (1729)
OTHER INFORMATION: I
NAME/KEY: SITE
LOCATION: (1735)
OTHER INFORMATION: I
NAME/KEY: SITE
LOCATION: (1741)
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                                               TTGGCTGAATTTGGAGCAGAGTTCAAGAACATAGAAMCCAACTATACARGAATATTTCTT
                                                                   TTGGCTGAATTTGGAGCAGAGTTCAAGAACATAGAAACCAACTATACAAGAATATTTCTT
                                                                                                                                    GCAGAGACATGGTTTGATTCCTACGACTGTTCCAAATTTGTGTTTAAGGACCTTTAACAAG
                                                                                                                                                                                       GGCGCTGCCTGTTTTTTGAGGGAAITGATGATGTTCACTGGAAGGAAAATGGGACATTA 553
                                                                                                                                                                                                                                                                                                                                                                         GGCAACTGTACATTTCCCCATCTCCGACCTGAAATGGATGCCCCTTTCTGGTGTAATCAA 493
                                                                                                           GCAGAGACATGGTTTGATTCCTACGACTGTTCCAAATTTGTGTTTAAGGACCTTTAACAAG
                                                                                                                                                                      GTTCAAGTAGCAACTATATCAGGAAACATGTTCAACCAAATGGCAAAGTGGGTGAAACAG
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COTHER INFORMATION: n is any nucleotide US-09-122-383-13
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US-09-122-383-13
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Best Local S
Matches 640
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LENGTH: 1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/122,383A CURRENT FILING DATE: 1998-07-24 EARLIER APPLICATION NUMBER: 60/053,613 EARLIER FILING DATE: 1997-07-24 NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Sheppard, Paul O.
APPLICANT: Gilbertson, Debra G.
TITLE OF INVENTION: SECRETED PROTEINS ENCODED
TITLE OF INVENTION: CHROMOSOME 13
FILE REFERENCE: 97-38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Degenerate nucleotide sequence encoding zsig46 OTHER INFORMATION: polypeptide of SEQ ID NO:2
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TTGAAAATTATGCATGATGCCATTGGATTCAGAAGTACATTAACTGGCAAGAACTACACA
                                                                                                                                             AAGTATACTITCTGTCCAACTGGCTCACCTATCCCAGTTATGGAGGGTGATGATGACATT
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                                         GARGINITYMGNYINCARGCNCCNGINIGGGARTIYAARTAYGGNGAYYINYINGGNCAY
                                                                     GAAGTTTTTCGATTACAAGCCCCCAGTATGGGAATTTAAATATGGAGACCTCCTGGGACAC
                                                                                                                  AARTAYAČNTTYTGYCCNACNGGNWSNCCNATHCCNGTNATGGARGGNGAYGAYGAYATH
                                                                                                                                                                                                TGGCCNGTNCCNTAYAARMGNTTYGAYTTYMGNCCNAARCCNGAYCCNTAYTGYCARGCN
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                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                      71.3%; Score 772.4; DB 9; 61.7%; Pred. No. 1.7e-198; ative 232; Mismatches 165;
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                        APPLICANT: Sheppard, Paul O.
APPLICANT: Gilbertson, Debra G.
FITLE OF INVENTION: SECRETED PROTEINS ENCODED
FITTLE OF INVENTION: CHROMOSOME 13
FILE REFERENCE: 97-38C1
CURRENT FILING DATE: 2002-03-26
PRIOR APPLICATION NUMBER: US 09/122,383
PRIOR FILING DATE: 1998-07-24
PRIOR APPLICATION NUMBER: US 60/053,613
PRIOR APPLICATION NUMBER: US 60/053,613
PRIOR APPLICATION NUMBER: US 60/053,613
PRIOR TILING DATE: 1997-07-24
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 13
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                                                                                                                                                                                                                                                                                                             Sequence 13, Application US/10010050A Fublication No. US20020173624A1 GENERAL INFORMATION:
TYPE: DNA
                    ENGTH: 1038
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OTHER INFORMATION:
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                                                                ACATCTGTTTTTGGGCCAACAGGAAACAAGACTCTTGGTTTAGCCATAAAAAAGATTTTAT
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CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR PELICATION NUMBER: US 60/207,456
PRIOR PELICATION NUMBER: US 09/632,366
PRIOR APPLICATION NUMBER: US 09/632,366
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SOFTWARE: Annomax Sequence
SEQ ID NO 22592
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Patent No. US20020048763A1
GENERAL INFORMATION:
                                                                                     LENGTH: 494
TYPE: DNA
ORGANISM: Homo s
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PRIOR FILING DATE: 2000-06-30
PRIOR APPLICATION NUMBER: US 09/774,203
PRIOR FILING DATE: 2001-01-29
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APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K
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TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
FILE REFERENCE: Acomica-X-1
FEATURE:
OTHER INFORMATION: MAP TO AC001226.1
OTHER INFORMATION: EXPRESSED IN PLACENTA,
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Hanzel, David K.
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                                                                                                                                                                                                                                                                Sequence 825, Application US/10040739 Publication No. US20020173635A1 GENERAL INFORMATION:
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                                                                                                Merberg, David
Treacy, Maurice
Spaulding, Vikki
TITLE OF INVENTION: SECRETED,
NUMBER OF SEQUENCES: 1519
                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: Genetics Institute,
STREET: 87 CambridgePark Drive
                                                                                                                                                                                                                                                  APPLICANT:
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INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 5.8
INFORMATION: EXPRESSED IN ADULT LIVER, SIGNAL = 5.8
INFORMATION: EXPRESSED IN LING, SIGNAL = 3.6
INFORMATION: EXPRESSED IN HELA, SIGNAL = 3.9
INFORMATION: EXPRESSED IN HELA, SIGNAL = 3.9
INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 5.3
INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 5.3
INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 5.3
INFORMATION: SWISSPROT HIT: 075503, EVALUE 0.00e+00
INFORMATION: EST_HUMAN HIT: H01255.1, EVALUE 0.00e+00
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Similarity 100.0%;
           CITY: Cambridge
STATE: Massachusetts
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COUNTRY:
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McCoy, John
LaVallie, Edward
Racie, Lisa
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Pred. No.
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RESULT 9
US-09-864-761-5832
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GENERAL INFORMATION:
APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David K.
APPLICANT: Hanzel, David K.
APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
                                                                                                                 Sequence 5832, Application US/09864761 Patent No. US20020048763A1
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Best Local Similarity
Matches 402; Conserv
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 498-8224
TELEPAX: (617) 876-5851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear
MOLECULE TYPE: cDNA
SEQUENCE DESCRIPTION: SEQ ID NO: 825:
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ATTORNEY/AGENT INFORMATION:
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APPLICATION NUMBER: US/10/040,739
FILING DATE: 07-Jan-2002
CLASSIFICATION: <Unknown>
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MEDIUM TYPE: Floppy Disk
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC Compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0,
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FILE REFERENCE: Aeomica-X-1 CURRENT APPLICATION NUMBER: US/09/864,761 CURRENT FILING DATE: 2001-05-23 PRIOR APPLICATION NUMBER: US 60/180,312

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PRIOR APPLICATION NUMBER: US 60/207,456

PRIOR FILING DATE: 2000-05-26

PRIOR PRILORITION NUMBER: US 09/632,366

PRIOR PRILING DATE: 2000-08-03

PRIOR APPLICATION NUMBER: GB 24263.6

PRIOR FILING DATE: 2000-10-04

PRIOR APPLICATION NUMBER: US 60/236,359

PRIOR APPLICATION NUMBER: US 60/236,359

PRIOR APPLICATION NUMBER: PCT/US01/00666

PRIOR APPLICATION NUMBER: PCT/US01/00667

PRIOR APPLICATION NUMBER: PCT/US01/00667

PRIOR APPLICATION NUMBER: PCT/US01/00667

PRIOR APPLICATION NUMBER: PCT/US01/00667

PRIOR APPLICATION NUMBER: PCT/US01/00664
                                                                                                                                                                                                                                                                                                                 US-09-864-761-5832
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SOFTWARE: Annomax Sequence
SEQ ID NO 5832
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                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: MAP TO ACO01226.1

OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 4.5

OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 6.3

OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 5

OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 3.6

OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 3.6

OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 3.9

OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 4.2

OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 5.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 474
                                                                                                                                                                                                                                                       Local Similarity
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FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00669
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00665
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APPLICATION NUMBER: US 09/608,408
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APPLICATION NUMBER: PCT/US01/00661
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APPLICATION NUMBER: PCT/US01/00668
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                        TGATTCCTACGACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAGTTGGCTGAATTTGG
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                                                                          AATTTATTATGAGACATGGAATGTAAAAGCCAGCCCAGAAAAGGGGGGCAGAGACATGGTT
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99.2%;
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Pred. No. 2.1e-92;
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US-10-264-049-1859
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SOFTWARE: PatentIn Ver. 3.:
SEQ ID NO 1859
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/10/264,049
CURRENT FILING DATE: 2002-10-04
PRIOR APPLICATION NUMBER: PCT/US01/18569
PRIOR FILING DATE: 2001-06-07
PRIOR APPLICATION NUMBER: US 60/209,467
PRIOR FILING DATE: 2000-06-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Birse et al.
TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE: PAl33P1
                                                                                                                                                                                                                                                                                                                 FEATURE: misc feature NAME/KEY: misc feature (295)..(295)
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LOCATION: (2). (2)
OTHER INFORMATION: n equals
                                                       FEATURE: misc_feature
LOCATION: (395)...(395)
OTHER_INFORMATION: n equals
                                                                                                                                                                                NAME/KEY: misc_feature
LOCATION: (323)..(324)
OTHER INFORMATION: n e
FEATURE: misc feature NAME/KEY: misc feature LOCATION: (440)..(440) OTHER INFORMATION: n ec
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NAME/KEY: misc feature
LOCATION: (313)...(313)
OTHER INFORMATION: n equals
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LOCATION: (175)..(175)
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                                                                                                                                     NAME/KEY: misc_feature
LOCATION: (331)..(331)
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CURRENT APPLICATION NUMBER: US/09/867,701
; CURRENT FILING DATE: 2001-05-29
; NUMBER OF SEQ ID NOS: 10912
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2579
; LENGTH: 351
; TYPE: DNA
; ORGANISM: Homo sapien
US-09-867-701-2579
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US-09-867-701-2579
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                                                                                                                     Query Match
Best Local Similarity
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Best Local Similarity
                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 266;
                                                                                                                                                                                                                                                                                                                              APPLICANT: Aglate, Paul A.
APPLICANT: Jones, Robert
APPLICANT: Harlocker, Susan L.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
TITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN CANCER
FILE REFERENCE: 210121.497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: n equals a,t,g,
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LOCATION: (478)...(478)
OTHER INFORMATION: n equals
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LOCATION: (464)..(464)
OTHER INFORMATION: n equals
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LOCATION: (458)..(458)
OTHER INFORMATION: n equals
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438 ACTGTACATTTCCCCATCTCCGACCTGAAATGGATGCCCCTTTCTGGTGTAATCAAGGCG
                                                                   378 GAAGTACATTAACTGGCAAGAACTACACAATGGAATGGTATGAACTTTTCCAACTTGGCA 437
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                                  GAAGTACATTAACTGGCAAGAACTACACAATGGAATGGTATGAACTTTTCCAACTTGGCA
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                                                                                                    Score 197.2; DB 9
Pred. No. 7.2e-43;
0; Mismatches 43
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Pred. No. 2e-61;
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SOPTWARE: PatentIn version 3.0
SEQ ID NO 1363
LENGTH: 473
TYPE: DNA
CRCANISM: Homo sapiens
US-09-954-456-1363
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US-09-954-456-1363/c
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APPLICANT: Young, Paul
TITLE OF INVENTION: Process for Identifying Anti-Cancer Therapeutic Agents Using Cance
TITLE OF INVENTION: Sets
FILE REFERENCE: 689290-76
                                                                                                                                                                                                                                  Matches
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                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/954,456
CURRENT FILING DATE: 2001-09-18
PRIOR APPLICATION NUMBER: US/60/233,617
PRIOR FILING DATE: 2000-09-18
PRIOR APPLICATION NUMBER: US/60/234,052
PRIOR FILING DATE: 2000-09-20
PRIOR FILING DATE: 2000-09-20
PRIOR APPLICATION NUMBER: US/60/234,923
                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 2276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE: 2000-09-25
PRIOR APPLICATION NUMBER: US/60/235,134
PRIOR FILING DATE: 2000-09-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US/60/235,863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: US/60/235,637 PRIOR FILING DATE: 2000-09-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/60/235,840 FILING DATE: 2000-09-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/60/235,638 FILING DATE: 2000-09-26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/60/235,720
                                                                                                                1012 GAAATTCCCTTTTATTAAAATAACATATGAAGAAATCCCTTTACCTATCAGAAACAAAAC 1071
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353
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                                  ACTCTCTGGTTTA 1084
                                                                                                                                                        <u>ÁGTGÁTTGTGCACAAACAGTTCTATTTGTTTTATAATTTTGAATATTTGGTTTTTTACCTAT</u>
                                                                                                                                                                             AGTGATTGTGCACAAACAGTTCTATTTGTTTTATAATTTTGAATATTTGGTTTTTTACCTAT 1011
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                                                                           GAAATTCCCTTTTATTAAAATAACATATGAAGAAATCCCTTTACCTATCAGAAACAAAAC
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ACTCTCTGGTTTA 341
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RESULT

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PRIOR APPLICATION NUMBER: US 60/227,866
PRIOR FILING DATE: 2000-08-24
PRIOR APPLICATION NUMBER: US 60/264,647
PRIOR FILING DATE: 2001-01-16
PRIOR APPLICATION NUMBER: US 60/300,111
PRIOR FILING DATE: 2001-06-22
NUMBER OF SEQ ID NOS: 5379
SEQ ID NO 5232
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; ORGANISM: Arabidopsis thaliana
US-09-938-842A-5232
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US-09-938-842A-5232
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GENERAL INFORMATION:

APPLICANT: Harper, Jeff
APPLICANT: Kreps, Joel
APPLICANT: Wang, Xun
APPLICANT: Zhu, Tong
TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING
TITLE OF INVENTION: SAME, AND METHODS OF USE
TITLE REFERENCE: SCRIP1300-3
FILE REFERENCE: SCRIP1300-3
CURRENT APPLICATION NUMBER: US/09/938,842A
CURRENT FILING DATE: 2001-08-24
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Best Local Similarity
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APPLICANT: MINTZ, Liat
APPLICANT: FAIGLER, Simchon
TITLE OF INVENTION: OLIGOUICLEOTIDE LIBRARY FOR DETECTING RNA TRANSCRIPTS AND
TITLE OF INVENTION: THAT POPULATE A TRANSCRIPTOME
FILE REFERENCE: 36688-0005
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SOFTWARE: PatentIn version 3.0
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CURRENT FILING DATE: 2001-07-20
PRIOR APPLICATION NUMBER: US 60/287,724
PRIOR FILING DATE: 2001-05-02
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APPLICANT: WASSERMI
APPLICANT: MINTZ, E
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PRIOR FILING DATE: 2000-07-28
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Similarity 100.0%;
60; Conservative C
                                                                                GAATATAGATTTCATCCCTGTGATTATGTTTATATATGGAAATTGAGTTTTACAAGAGTG
AAACTGCTTCTTCATGTGCCTACCAAAAAAAAAAAACTGCTTCTTCATGTGGCTTCTAAGT 240
                                 AAATGAAACATCTGTTTTTGGGCCAACAGGAAACAAGACTCTTGGTTTTAGCCATAAAAAG 879
                                                                                                                         GAACATAGAAACCAACTATACAAGAATATTTCTTTACAGTGGAGAACCTACTTATCTGGG 819
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Pred. No. 0.33;
0; Mismatches 126; Indels
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US-09-938-842A-5232
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SEQ ID NO 5232
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APPLICANT: Zhu, TONG
APPLICANT: Zhu, TONG
TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING
TITLE OF INVENTION: SAME, AND METHODS OF USE
FILE REFERENCE: SCRIP1300-3
CURRENT APPLICATION NUMBER: US/09/938,842A
CURRENT FILING DATE: 2001-08-24
PRIOR APPLICATION NUMBER: US 60/227,866
PRIOR PILING DATE: 2000-08-24
PRIOR PILING DATE: 2000-08-24
PRIOR PILING DATE: 2001-01-16
PRIOR PILING DATE: 2001-01-16
PRIOR PILING DATE: 2001-01-16
PRIOR PILING DATE: 2001-06-22
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APPLICANT: Kreps, Joel
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                                                                                                                      AATTITIGATGCAGIGATIGIGCACAAACAGTICTATTIGITITIATAATTITIGAATATIG 999
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GCCTGTA 367
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Pred. No. 0.33;
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Search completed: April 22, 2004, 05:09:05
Job time : 848.604 secs

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Result
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1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*
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Gapop 10.0 , Gapext 1.0
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US-08-232-463-14
US-09-790-988-1
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US-09-261-290-1
US-09-466-036A-1
US-09-466-036A-1
US-09-466-036A-3
US-09-466-036A-3
US-09-621-976-813
US-09-621-976-813
US-09-269-939A-41
US-09-269-939A-41
US-09-252-991A-10838
US-09-252-991A-10838
US-09-252-991A-10833
US-09-253-991A-10833
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3 US-08-545-528D-1
3 US-09-103-840A-2
4 US-08-545-528D-1
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Sequence 14, Appli
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Sequence 11, Appli
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Query Match

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DATE: 26-AU DATE: 26-AU DATE: 26-AU AGENT INFORM BENT, Stephe ATION NUMBER: NICATION NUMBER: (703)683- 889.19 FOR SEQ ID CHARACTERIST 721B base mucleic acid DNESS: sing W: 1003CE: pTZgpt-F1s 14	DP SEQUENCES: NDENCE ADDRES SSEE: Foley 1 1800 Diag Alexandria VA VA VA TYPE: Flop TYPE: Flop TYPE: Flop TYPE: Flop TYPE: Patent: REE: Patent:	14/c Applicatio Applicatio (670367 ORMATION: : DORMER, : SCHEIFLI : SCHEIFLI	ת נו
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SEQ ID NO 1
LENGTH: 640681
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Matches :
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                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: SHIGENOBU, SHUJI
APPLICANT: WATANABE, HIDEMI
APPLICANT: WATANABE, HIDEMI
APPLICANT: HATTORI, MASAHIRA
APPLICANT: SAKAKI, YOSHIYUKI
TITLE OF INVENTION: GENOME DNA OF BACTERIAL SYMBIONT OF APHIDS
FILE REFERENCE: 081356/0159
CURRENT APPLICATION NUMBER: US/09/790,988
CURRENT FILING DATE: 2001-02-23
                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 7
                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: JP2000-107160 PRIOR FILING DATE: 2000-04-07
                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Buchnera sp.
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880 AFTITATTACCCCTTCAAACCACATTTGCCAACTAAAGAATTTCTGTTGAGTCTCTTGCA 939
                                                                                                                                                             765 TAGAAACCAACTATACAAGAATATTTCTTTACAGTGGAGAACCTACTTATCTGGGAAATG
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                                                        TATTTGAAATTTTTGCACCTAAACTTAATAAAATTGTTTTTAACTCTATTCTTGAAAAACG
                                                                                      AAACATCTGTTTTTGGGCCAACAGGAAACAAGACTCTTGGTTTAGCCAT----AAAAAG
                                                                                                                             TAAAAAATTTTGAACCGAAATTATTGCCATAAATTAAAAAATCTGTTTTTCTAGAAATAT 74329
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                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                  3.8%;
                                                                                                                                                                                                 Score 41.2; DB 4; Length 640681; Pred. No. 3.4; 0; Mismatches 108; Indels 5;
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US-08-500-857A-7
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US-08-500-857A-7
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
OPTWARE: PATENTIN RELEASE #1.0, V6
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/500,857A
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                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 133; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: MURCHY JR, GERALD M
REGISTRATION NUMBER: 28,977
REFERENCE/DOCKET NUMBER: 760-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-205-8000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: BURNELL, JAMES N
TITLE OF INVENTION: POLYPEE
TITLE OF INVENTION: ORTHOPH
TITLE OF INVENTION: AND REC
TITLE OF INVENTION: THE DNA
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CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: OHATA, SHOZO
APPLICANT: USAMI, STORU
APPLICANT: BURNELL, JAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: BIRCH, STEWART, KOLASCH AND STREET: 8110 GATE HOUSE ROAD SUITE 500 CITY: FALLS CHURCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: U.
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                                                                                                                   578 ACTIGCACAAGICTICATIAAAAAGACIGAAGAATICACIAAACAACCATICCCAGIIGA 637
                                                                                                                                                          646 GAATGTAAAAGCCAGCCCAGAAAAGGGGGCAGAGACATGGTTTGATTCCTACGACTGTTC 705
                                                                                                                                                                                                  518 CAAAAAAGTTGAAAAGGGAGTTAAATTAGATACTGAATTAGATGCTAATGATATGAAAGA 577
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                                         706 CAAATTTGTGTTAAGGACCTTTAACAAGTTGGCTGAATTTGGAGCAGAGTTCAAGAACAT 765
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DEDNESS: single
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AGAAACCAACTATACAAGAATATTTCTTTACAGTGGAGAACCTACTTATCTGGGAAATGA 825
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ORTHOPHOSPHATE DIKINASE ACTIVITY, DNA ENCODING THE SAME
AND RECOMBINANT VECTOR AND TRANSFORMED PLANTS CONTAINING
THE DNA
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Pred. No. 0.2;
0; Mismatches 154; Indels
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EAST
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Patent No. 5891855
                         Sequence 1, Application US/09211290
Patent NO. 6071885
GENERAL INFORMATION:
APPLICANT: Florkiewicz, Robert Z.
APPLICANT: FLORKIEWICZ, ROBERT Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/599,895
FILING DATE: 31-CAN-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: NO. 5891855cenburg Ph.D., Carol
REGISTRATION NUMBER: 39,317
REFERENCE/DOCKET NUMBER: 39,317
REFERENCE/DOCKET NUMBER: 760100.416
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-4900
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Best Local 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (206) 682-6031 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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TITLE OF INVENTION: INHIBITORS OF LEADERLESS PROTEIN EXPORT
NUMBER OF SEQUENCES: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
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TYPE: nucleic acid
engle
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ADDRESSEE:
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SEED and BERRY LLP
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                                                                                                                 PROTEIN EXPORT
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Patent No. 6107283
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INFORMATION FOR SEQ ID NO:
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NAME: Maki, David J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                            APPLICANT: Florkiewicz, Robert Z.
TITLE OF INVENTION: INHIBITORS OF LEADERLESS PROTEIN EXPORT
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 09/211,290
PILING DATE: 12-DEC-1998
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TYPE: nucleic acid
STRANDEDNESS: single
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                                            FILING DATE: CLASSIFICATION:
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                                                                           APPLICATION NUMBER:
                                                                                                                                                                                     ZIP: 98104-7092
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Pred. No. 0.37;
0; Mismatches
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ATTORNEY/AGENT INFORMATION:

NAME: Maki, David J REGISTRATION NUMBER:

ਰਹ. *ਜR: 31,392 *00/

200124.401D1

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RESULT 7
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GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 3877 base pairs
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INFORMATION FOR SEQ ID NO: 1:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
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                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 09/211,290
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Maki, David J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 200124.401D1
TELECOMMUNICATION INFORMATION:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPATING SYSTEM: PC-DOS/MS-DOS
SOFTWAKE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: <Unknown> PRIOR APPLICATION DATA:
SEQUENCE DESCRIPTION: SEQ ID NO: 1:
                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
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                                                                    LENGTH: 3877 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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                                                                                                                                                                                                                                                                                                                           TELEPHONE:
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Pred. No. 0.37;
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APPLICANT: HESSE,
APPLICANT: AMBROSII
APPLICANT: BURTSCH
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                               Matches
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                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                     TELEFAX: (202) 638 - 4810 INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: FISH PC compatible
COMPUTER: GOMPATISH: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/849,536A
FILING DATE: Herewith
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Wong, King L.
REGISTRATION NUMBER: 37,500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: RECOMBINANT PROTEINASE FROM CLOSTRIDIUM
TITLE OF INVENTION: HISTOLYTICUM AND ITS USE FOR ISOLATING CELLS AND GROUPS OF CELL
NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESS:
ADDRESSEE: Nikaido, Marmelstein, Murray & Oram LLP
STREET: 655 15th St., N.W., Suite 330 - G St. Lobby
                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 2428 base pail
                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: (202) 638 - 5000
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                                                                                                               NAME/KEY:
LOCATION:
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LOCATION:
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                                                                                                                                                                                                                                  TOPOLOGY:
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879 GATTTTATTACCCCTTCAAACCACATTTGCCAACTAAAGAATTTCTGTTGAGTCTCTTGC 938
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Pred. No. 0.37;
0; Mismatches 6
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                                                 Score 39.6; DB 2; Pred. No. 0.37;
                                 Mismatches
                                 84;
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RESULT 10
US-10-204-708-71/c
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; NAME/KEY: CDS
; LOCATION: 235..399
US-09-621-976-2813
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US-09-621-976-2813/c
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Sequence 71, Application US/10204708
Sequence 71, Application US/10204708
Patent No. 6677731
GENERAL INFORMATION:
APPLICANT: OLEK, Alexander
APPLICANT: PIEPENBROCK, Christian
APPLICANT: BERLIN, Kurt
TITLE OF INVENTION: Diagnosis of Diseases Associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patent.pm
SEQ ID NO 2813
LENGTH: 832
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/621,976
CURRENT FILING DATE: 2000-07-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: ESTs and Encoded Human Proteins FILE REFERENCE: GENSET.054PR2
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Pred. No. 0.25;
74; Mismatches 142;
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RESULT 11
US-09-269-939A-41/c
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                                                                                                                                               SOPTWARE: Pater
SEQ ID NO 41
FENGTH: 21721
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CURRENT FILING DATE: 2003-05-06
PRIOR APPLICATION NUMBER: PCT/EP01/03971
PRIOR FILING DATE: 2001-04-06
PRIOR APPLICATION NUMBER: DE 10019058.8
PRIOR FILING DATE: 2000-04-06
PRIOR APPLICATION NUMBER: DE 10019173.8
PRIOR FILING DATE: 2000-04-07
PRIOR PILING DATE: 2000-04-07
PRIOR PILING DATE: 2000-04-07
PRIOR APPLICATION NUMBER: DE 10032529.7
PRIOR APPLICATION NUMBER: DE 10032529.7
PRIOR FILING DATE: 2000-06-30
PRIOR FILING DATE: 2000-06-30
PRIOR FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No. 6635431 GENERAL INFORMATION:
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Best Local Similarity 48.2%;
Matches 110; Conservative
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SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                             TITLE OF INVENTION: LSR Receptor, Its Activity, Its Cloning and Its Application To TITLE OF INVENTION: The Diagnosis Prevention And/or Treatment of Obesity and TITLE OF INVENTION: Related Risks or Complications
FILE REFERENCE: GENERI.035APC
CURRENT APPLICATION NUMBER: US/09/269,939A
CURRENT FILING DATE: 199-05-28
PRIOR APPLICATION NUMBER: FR 97/10088
PRIOR APPLICATION NUMBER: FR 98/05032
                                                                                                                                                                                                                   PRIOR FILING DATE: 1:
NUMBER OF SEQ ID NOS:
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FEATURE:
NAME/KEY:
LOCATION:
LOCATION:
                                                                                                                                   LENGTH: 21
TYPE: DNA
                                                                                                              ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 8607
TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
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    3438..3782
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                                            1898..2253
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Yen-Potin, Frances
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Pred. No. 1;
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LOCATION:
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LOCATION: 11478
OTHER INFORMATION: diverging mucleotide,
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OTHER INFORMATION: diverging nucleotide, G in NAMS/KEY: Misc_Feature
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LOCATION: 8604
OTHER INFORMATION: diverging nucleotide,
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OTHER INFORMATION: diverging insertion, GAATGAAA in ref genbank:AD000684
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OTHER INFORMATION: diverging nucleotide, G
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                                                  LOCATION: 13896
OTHER INFORMATION: diverging nucleotide,
                                                                                                                                                                                                                   LOCATION: 11779
OTHER INFORMATION: diverging nucleotide,
                                                                                                                                                                                                                                                                       LOCATION: 11577
OTHER INFORMATION: diverging deletion,
                                                                                                                                                                                                                                                                                              NAME/KEY: Misc Feature LOCATION: 11577
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LOCATION: 9878
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OTHER INFORMATION: diverging nucleotide,
                                                                                                       OTHER INFORMATION: diverging nucleotide,
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; LOCATION: 1..21721; OTHER INFORMATION: n= a,g,c or US-09-269-939A-41
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                                                               US-09-269-939A-19/c
; Sequence 19, Application
; Patent No. 6635431
; GENERAL INFORMATION:
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Best Local
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APPLICANT: Bihain, Bernard
APPLICANT: Bougueleret, Lydie
APPLICANT: Yen-Potin, Frances
TITLE OF INVENTION: LSR Receptor, Its Activity,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: Misc_Feature
LOCATION: 21635
OTHER INFORMATION: diverging insertion,
NAME/KEY: Misc_Feature
LOCATION: 19963..19965
OTHER INFORMATION: Potential variant sp.
NAME/KEY: Misc_Feature
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LOCATION: 21476
OTHER INFORMATION: diverging nucleotide,
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OTHER INFORMATION: diverging deletion, J
NAME/KEY: Misc Feature
LOCATION: 21270
OTHER INFORMATION: diverging nucleotid,
NAME/KEY: Misc Feature
LOCATION: 21356
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LOCATION: 20501
OTHER INFORMATION: diverging deletion,
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LOCATION: 19474
OTHER INFORMATION: diverging mucleotide,
NAME/KEY: Misc Feature
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OTHER INFORMATION: diverging deletion, G in
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LOCATION: 17169
OTHER INFORMATION: diverging nucleotide,
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OTHER INFORMATION: diverging deletion,
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LOCATION: 16732
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l Similarity 54.1%;
80; Conservative
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Pred. No. 1.
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 Its Cloning and Its Application
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Sequence 1, Application US/09499522
Patent No. 6479238
GENERAL INFORMATION:
APPLICANT: Blumenfeld, Marta
APPLICANT: Bougueleret, Lydie
APPLICANT: Bougueleret, Lydie
APPLICANT: Bougueleret, Lydie
TITLE OF INVENTION: POLYMORPHIC MARKERS OF TH
FILE REFERENCE: GENSET.053AUS
CURRENT APPLICATION NUMBER: US/09/499,522
CURRENT APPLICATION NUMBER: US 60/119,592
EARLIER APPLICATION NUMBER: US 60/119,592
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US-09-269-939A-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
JS-09-499-522-1/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
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CURRENT FILING DATE: 1999-05-28
PRIOR APPLICATION NUMBER: FR 97/10086
PRIOR FILING DATE: 1997-08-06
PRIOR APPLICATION NUMBER: FR 98/05032
PRIOR FILING DATE: 1998-04-22
PRIOR FILING DATE: 1998-04-22
NUMBER OF SEQ ID NOS: 41
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ORGANISM: Homo sapiens
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OTHER INFORMATION: Potential variant splicing site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: Misc
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APPLICATION NUMBER: US 60/144,784
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| 80; Conserv
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Pred. No. 1
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SOFTWARE: Patent.pm
SEQ ID NO 1
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                                                                                                                                                                                                             NAME/KEY: misc feature
LOCATION: 22324..23187
OTHER INFORMATION: homology
                                                                                                                                                                                                                                                                                   FEATURE:
NAME/KEY: misc feature
TOTATION: 1..2000
TOTATION: not
                                              NAME/KEY: primer_bind
LOCATION: 946..963
                                                                                       LOCATION: 1047..1068
OTHER INFORMATION: downstream
                                                                                                          NAME/KEY: primer bind LOCATION: 1047...1068
                                                                                                                                            LOCATION: 523..544
OTHER INFORMATION: upstream amplification primer 17-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: exon
LOCATION: 20329..20957
OTHER INFORMATION: exon9
NAME/KEY: primer_bind
                           OTHER INFORMATION: upstream amplification primer 99-4576
                                                                                                                                                                     NAME/KEY: primer bind LOCATION: 523..544
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OTHER INFORMATION: potential
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NAME/KEY: polyA_signal
LOCATION: 21168..21173
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LOCATION: 21047...21187
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OTHER INFORMATION: exon6
FEATURE:
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LOCATION: 12163..12
OTHER INFORMATION:
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LOCATION: 2001..235
OTHER INFORMATION:
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OTHER INFORMATION: exon8
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NAME/KEY: exon
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OTHER INFORMATION: exon5
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OTHER INFORMATION: exon7
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FEATURE:
FEATURE:
NAME/KEY: primer bind
TOCATION: 1096...1115
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NAME/KEY: primer bind

TOCATION: 3882...3901
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OTHER INFORMATION: downstream
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LOCATION: 2062...2081
OTHER INFORMATION: downstream
                                                                                                                         NAME/KEY: primer_bind
LOCATION: 4444..4463
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OTHER INFORMATION: upstream
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OTHER INFORMATION: downstream
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OTHER INFORMATION: downstream
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OTHER INFORMATION: downstream
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OTHER INFORMATION: upstream
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OTHER INFORMATION: downstream amplification primer 99-4576 , complement
NAME/KEY: primer_bind
LOCATION: 7072..7089
                                            OTHER INFORMATION: upstream
                                                               NAME/KEY: primer bind LOCATION: 6638..6655
                                                                                                          OTHER INFORMATION: downstream
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OTHER INFORMATION: upstream
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LOCATION: 2470..2489
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LOCATION: 1616..1635
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                                            amplification primer 99-4577
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RESULT 14
US-09-252-91A-10838/c
Sequence 10838, Application
Sequence 10838, Se
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                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: AUCLEIC ACID AND AMINO ACID
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
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                                                                                 FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER:
                     PRIOR APPLICATION NUMBER: US PRIOR FILING DATE: 1998-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: primer_bind
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NAME/KEY: primer bind

TOTATION: 10023...10040
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OTHER INFORMATION: upstream
FEATURE:
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LOCATION: 7995..8012
OTHER INFORMATION: upstream
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LOCATION: 12481..12501
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OTHER INFORMATION: downstream
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LOCATION: 10546..1056
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LOCATION: 8576..8593
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80; Conservative
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RESULT 15

US-09-252-991A-10890

Sequence 10890, Application US/09252991A

Patent No. 6551795

GENERAL INFORMATION:
APPLICANT: MATC J. Rubenfield et al.

TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS

TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

FILE REFERENCE: 107196,136

CURRENT APPLICATION NUMBER: US/09/252,991A

CURRENT FILING DATE: 1999-02-18

PRIOR APPLICATION NUMBER: US 60/074,788

PRIOR APPLICATION NUMBER: US 60/074,788

PRIOR APPLICATION NUMBER: US 60/094,190

PRIOR APPLICATION DATE: 1998-07-27

NUMBER OF SEQ ID NOS: 33142

LENGTH: 474

TYPE: DNA

COEGNITAN: DESIGNOCES SECUCIOSES

COURSENTED DATE: 1998-07-27
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; NUMBER OF SEQ ID MOS: 33142
; SEQ ID MO 10838
; LENGTH: 429
; TYPE: DNA
; ORGANISM: Peeudomonas aeruginosa
US-09-252-991A-10838
3earch completed: April 22, 2004, 04:42:56
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Matches
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                                                                                176 TCGCCGCGCTGGGCGGCGTCAGCGGCGAGATGTGGCGTGCCGACAAGGCCGGTCTCGGCG 235
                                                                                                                            254 GCTGGGCCTTGTTGCGGGCGCTGGGGCGTCGATCGTCTGCGGCGTGG 195
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Post-processing: Minimum Match 0%
Maximum Match 100%
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Maximum DB seq length: 200000000
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Copyright (c) 1993 - 2004 Compugen Ltd.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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Result	Score	Query Match	Length	DB	ID	Description
ц	1084	100.0	1486	N	AAX02855	Aax02855 Human zsi
N	1067	86	1751	N	AAZ24826	Human
ω	1064.6	•		4	AAK94829	Human
4	772.4	71.3		N	AAX02866	Human
ហ	567	52.3	697	4	AAK93424	Human
σ	567	52.3	697	4	AAK92158	Human
7	491	45.3	494	4	AAI25096	Probe
8	491	45.3	494	4	ABA70786	Human
9	491	45.3	494	4,	AAI50961	Aai50961 Probe #19
10	491	45.3	494	4	ABA37272	Probe
11	491	45.3	494	4	AAK44992	Human
12	491	45.3	494	4	AAK19040	Aak19040 Human bra
13	491	45.3	494	4	ABS44658	Abs44658 Human liv
14	491	45.3	494	σ	ABS19237	Human
15	401.4	37.0	506	N	AAV88347	Aav88347 EST clone
16	380.2	35.1	474	4	AAI15879	Probe
17	380.2	35.1	474	4	ABA58185	Human
18	380.2	•	474	4	AAI37794	Probe
19	380.2	•	474	4	ABA27366	Probe
20		35.1	474	4	AAK31927	Human
21	380.2		474	4	AAK06266	Aak06266 Human bra
22	380.2	35.1	474	4	ABS31617	Human
23	380.2	ر ا ا	474	ω	ABS06689	Human

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45	44	43	42	41	40	39	38	37	36	35	34	ω	32	31	30	29	28	27	26	25	24
43.4	43.4	43.8	43.8	43.8	44	44.4	45.4	46.8	60	89.6	89.6	89.6	89.6	112.2	112.2	112.2	112.2	133	133	197.2	266
4.0	4.0	4.0	4.0	4.0	4.1	4.1	4.2	4.3	5.5	8.3	8.3	8.3	8 .u	10.4	10.4	10.4	10.4	12.3	12.3	18.2	24.5
4241	4241	17419	17419	17419	1981	2000	1945	2000	60	631	631	630	630	631	631	630	630	473	473	351	497
υı	U	σ	σ	4.	9	7	σ	7	σ	σ	6	σ	σv	9	9	6	σ	ტ	9	6	σ
ABA17546	ABA17545	ABK28238	ABL33295	AAS45393	ADB87400	ADA71938	ABZ17427	ADA71938	ABN37591	ABQ13705	ABQ13704	ABQ40650	ABQ40651	ABQ13703	ABQ13702	ABQ40652	ABQ40653	ABL68165	ABL66053	ABL79601	ABQ55979
Aba17546 H	Aba17545 H	Abk28238 D			Adb87400 T	Ada71938 R	-	Ada71938 R	Abn37591 H		Abq13704 O	0	651	w	Abq13702 O	Abq40652 O	Abq40653 O	Ab168165 K	Ab166053 L	Ab179601 H	Abq55979 H
Human ner	Human ner	DNA trans	Human imm	Chemicall	Transgene	Rice gene	Arabidops	Rice gene	Human spl	Oligonuc1	Oligonucl	Oligonucl	Oligonucl	Oligonucl	Oligonucl	Oligonucl	Oligonucl	Kidney ca	Lung canc	Human ova	Human ova

ALIGNMENTS

Secreted protein; zsig46; human; chromosome 13; thyroid; disease; hypothyroidism; Graves' disease; thyrotoxicosis; thyroid cancer; Hirschsprung's disease; neuronal ceroid-lipofucinosis; Wilson disease; Reiger syndrome; immunoassay; detection; anti-idiotypic antibody; Human zsig46 DNA. 14-MAY-1999 AAX02855 standard; DNA; 1486 BP Homo sapiens. therapy; diagnostic; ss. AAX02855; (first entry)

Location/Qualifiers /*tag=

WO9905275-A1. /product= "zsig46"

24-JUL-1997; 24-JUL-1998; 04-FEB-1999. 98WO-US015431.

(ZYMO) ZYMOGENETICS INC. 97US-0053613P.

Sheppard PO, Gilbertson DG;

New secreted polypeptide, zsig46, and its fragments, related fusion proteins - used for diagnosis and treatment of thyroid disorders or diseases involving genes on chromosome 13. WPI; 1999-142930/12. P-PSDB; AAW92967.

Claim 27; Page 88-90; 101pp; English.

This invention describes the isolation zsig46 encoded by a gene on chromosome of a novel human secreted protein, 13 which is mainly expressed in

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the thyroid. This product can be used to study secretion of proteins from collisions and also to treat or prevent deficient expression of zsig46, which may be associated with thyroid diseases (e.g. hypothyroidism, Graves, collisease, thyrotoxicosis, thyroid cancer etc.) or with diseases that involve genes in the same region of chromosome 13 (e.g. Hirschsprung's disease, neuronal ceroid-lipofucinosis, Wilson disease and Reiger collisease, neuronal ceroid-lipofucinosis, Wilson disease and Reiger collisease, neuronal ceroid-lipofucinosis, Wilson disease and Reiger collisease to detect zsig46 or cells expressing it, e.g. for assessing thyroid function to produce anti-idiotypic antibodies, for affinity purification of zsig46, to screen expression libraries, to neutralise collisease activity, and to deliver toxins, radioisotopes etc. for therapeutic or diagnostic purposes. Agonists of the product can be used to promote growth, differentiation and proliferation of specific cell types, e.g. for treating (extra)thyroid diseases or as additive to cell
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This sequence represents a nucleic acid molecule which encodes a secreted human protein. The gene number, and the clone it is derived from, are detailed in the descriptor line. The gene can be used to generate fusion proteins by linking to the gene to a human immunoglobulin FC portion (e.g. AAZ24802) for increasing the stability of the fused protein as compared to the human protein only. The invention relates to 95 novel genes and their fragments (nucleic acid sequences: AAZ24811-Z24907; amino acid sequences AAY41308-Y41404) which are useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. Also, pathological conditions can be diagnosed by determining the amount of the new polymocleotides. Specific uses are described for each of the 95 polymucleotides, based on which tissues they are most highly expressed in (see AAZ24811 for described uses)
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clones. 830 cDNA molecules encoding a human protein have been isolated and nucleotide sequences of 5'- and 3'-ends of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cDNA libraries that were synthesised by the oligo-capping method. The primers

The invention relates to primers for synthesising full length

SEQ ID NO 3977; 1380pp + Sequence Listing; English.

Claim 8;

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 enable the production of the full length cDNA easily without any special methods. The present sequence is a full length human cDNA of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in CD-ROM format directly
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                                                                                    This invention describes the isolation of a novel human secreted protein, comparison to the thyroid. This product can be used to study secretion of proteins from comparison that the thyroid. This product can be used to study secretion of proteins from cells and also to treat or prevent deficient expression of zsig46, which may be associated with thyroid diseases (e.g. hypothyroidism, Graves' disease, thyrotoxicosis, thyroid cancer etc.) or with diseases that involve genes in the same region of chromosome 13 (e.g. Hirschaprung's comparison of the product as industry proteins, are used as immunoassay reagents to detect zsig46 or cells expressing it, e.g. for assessing thyroid function to produce anti-idiotypic antibodies, for affinity purification of zsig46, to screen expression libraries, to neutralise zsig46 activity, and to deliver toxins, radioisotopes etc. for therapeutic or diagnostic purposes. Agonists of the product can be used to promote growth, differentiation and proliferation of specific cell types, e.g. for treating (extra)thyroid diseases or as additive to cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New secreted polypeptide, zsig46, and its fragments, related fusion proteins - used for diagnosis and treatment of thyroid disorders or diseases involving genes on chromosome 13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Secreted protein; zsig46; human; chromosome 13; thyroid; disease; hypothyroidism; Graves' disease; thyrotoxicosis; thyroid cancer; hirschsprung's disease; neuronal ceroid-lipofucinnosis; Wilson disease; Reiger syndrome; immunoassay; detection; anti-idiotypic antibody;
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Query Match
Best Local Similarity
Matches 640; Conserv

B₽;

189 A; 106 C; 179 G;

166 T; 0 U; DB 2;

71.3%; Score 772.4; 61.7%; Pred. No. 2.4

Conservative

232;

Mismatches 165;

2.4e-190;

Length 1038; 398 Other;

0;

Gaps

0

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MODEL-frame+_D2n.model -DEV=xlh
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Q=/cgn2_1/USPTO_Spool/US10010050/runat_22042004_113204_27549/app_query.fasta_1.1372
DB=GenEmbl -QFMT=fastap -SUFFIX=-ge -MINMATCH=0.1 -LOOFEXT=0
UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=bluman40.cdi -LIST=45
DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE-LOCAL
OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
USET=US10010050_GCGN_1 1_7433_@runat_22042004_113204_27549 -NCPU=6 -ICPU=3
NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
PGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
             April 24, 2004, 22:59:32 ; Search time 6540.36 Seconds (without alignments) 2292.945 Million cell updates/sec
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30: em_htg_inv:*
31: em_htg_inv:*
32: em_htg_other:*
33: em_htg_mus:*
34: em_htg_pin:*
35: em_htg_pin:*
36: em_htg_rrt:*
36: em_htg_vrt:*
40: em_htgo_nus:*
41: em_htgo_nus:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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ALIGNMENTS

JOURNAL Submitted (26-MAY-1998) Department of Human Molecular Genetics, National Public Health Institute, Mannerheimintie 166, Helsinki 00300, Finland	2y 121 MetGluTrpTyrGluLeuPheGlnLeuGlyAsnCysThrPheDroHisLeuArgProGlu 140
CE 2 (bases Savukos and Pel	OY 101 LeuLysIleMetHisAspAlaIleGlyPheArgSerThrLeuThrGlyLysAsnTyrThr 1:0
11portuscinosis JOURNAL Nat. Genet. 19 (3), 286-288 (1998) MEDLINE 98324783	OY 81 GIUVAIPNEATGLEUGINALAPTOVALTTPGIUPNELYSTYTGLYASpLeuLeuglyHis 100
ene encoding ish variant	227 AAGTATACTITCTGTCCAACTGGCTCACCTATCCCAGTTATGGAGGGTGATGATGACATT
Mammalia, Butheria; Primatee; Catarrhini; Hominidae; Homo. REFERENCE 1 (bases 1 to 4080) AUTHORS Savukoski,M., Klockars,T., Holmberg,V., Santavuori,P., Lander,E.S	Db 167 TGCCGGTGCCCTACAAGCGCTTTGACTTCCGTCCAAAACCTGATCGTTCATTGTCAAGCT 226 Qy 61 LysTyrThrPheCysProThrGlySerProIleProValMetGluGlyAspAspAspIle 80
Homo sapiens (human) SM Homo sapiens First- Metagos. Chorders. Cranists. Vertebrats.	TrpProValProTyrLysArgPheAspPheArgProLysProAspProTyrCysGlnAla
ACCESSION AF068227 VERSION AF068227.1 GI:3342385 KEYWORDS .	Qy 21 LeuTrpLeuAlaValProGlyTrpSerArgValSerGlyIleProSerArgArgHis 40
27 TION	Qy 1 MetArgArgGlyAlaGlyAlaAlaArgGlyArgAlaSerTrpCysTrpAlaLeuAlaLeu 20
REGILL 5	US-10-010-050A-2 (1-346) x BD073402 (1-1486)
341 LysThrLeuSerGlyLeu	y Match: 100.00% Indels: Gaps:
Qy 321 PrometLysPheProPheIleLysIleThrTyrGluGluIleProLeuProIleArgAsn 34	Pred. No.: 1.41e-166 Length: 1486 Score: 1927.00 Matches: 346 Percent Similarity: 100.00% Conservative: 0 Best Local Similarity: 100.00% Mismarches: 0
Qy 301 AspAlaValTieValHisLysGlnPheTyrLeuPheTyrAsnPheGluTyrTrpPheLeu 33	
281 TyrProPheLysProHisLeuProThrLysGluPheLeuLeuSerLeuLeuGLnTlePhe	# EATURES LOCATION (WAITIERS SOURCE 11486 /organism="Homo sapiens" /mol_type="genomic_DNA" /mol_type="genomic_DNA"
261 InrservalPhedlyProfingLyAsnLySfnrLeuglyLeuAlaiLelySargehelyr	CC Secreted protein which Location/Qualifier FT CDS (47).
767 GAAACTATACAAGAATATTTCTTTACAGTGGAGAACCTACTTATCTGGGAAATGAA	PC C12N1/21,C12N5/10,C12P21/02,C12Q1/68,C12N15/00,A61K37/02,C12N5/ PC
241 GluThrAsmTyrThrArgIlePheLeuTyrSerGlyGluProThrTyrLeuGlyAsmGlu	PI PAUL O SHEPPARD, DIBRA G GILBERTON PC C12N15/09,A61K38/00,A61K48/00,C07K14/47,C07K16/18,C12N1/15, PC C12N1/19,
Qy 221 LysPheValLeuArgThrPheAsnLysLeuAlaGluPheGlyAlaGluPheLysAsnIle 2.	
647 AATGTAAAAGCCAGACAAAAAGGGGGGAGAGACATGGTTTGATTCCTACGACTGTTCC	ZYMOGENETICS INC OS Homo sapiens (huma
Db 587 AACCAAATGCCAAAGTGGGTGAAACAGGACAATGAAACAGGAATTTATTATGAGACATGG 6.	AUTHORS Sheppard, P.O. and Gilberton, D.G. TITLE Secreted protein which human chromosome 13 encodes JOURNAL Patent: JP 2001511345-A 1 14-AUG-2001:
181 AsnGlnMetAlaLysTxpValLysGlnAspAsnGluThrGlyIleTyrTyrGluThrTxp	Eukar Mamma
Qy 161 ValHisTrpLysGluAsnGlyThrLeuValGlnValAlaThrIleSerGlyAsnMetPhe 18	VEKSION 5073402.1 G1:22619005 KEYWORDS JP 2001511345-A/1. SOURCE Homo sapiens (human) ORGANISM Homo sapiens
Qy 141 MetAspAlaProPheTrpCysAsnGlnGlyAlaAlaCysPhePheGluGlyIleAspAsp 10	BD073402 ION Secreted pro

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mberg, V., Santavuori, P., Lander, E.S.
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e infantile neuronal ceroid
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Catarrhini; Hominidae; Homo.
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/codon_start=1
/product="putative transmembrane protein"
/product="putative transmembrane protein"
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PVPYKRFDFFKPDPYCQAKYTFCPTGSPIPVMEGDDDIEVFRLQAPVWEFKYGDLLG
HLKIMIDAIGFRSTLTGRWYTMEWYELFQLGWCTPHLAEPMDAPFWCNQGAACFFEG
IDDVHKRENGTLVQAATISGNWENQMAAWVKQDNETGIYYETWVKASSEKGAETWFD
SYDCSKFVLFTFNKLAEFGAEFKNIETNYTRIFLYSGEPTYLGNETSVFGPTGNKTLG
LAIKRFYYPFKPHLPTGFFLLSLLQIFDAVIVHKQFYLFYNFEYWFLPMKFPFIKITY
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/mol_type="mRNA"
/db_xref="taxon:9606"
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OS Homo sapiens (human)
PN UP 2002506627-A/25
PD 05-MAR-2002
PF 18-MAR-1999 US 60/078566,19-MAR-1998 US 60/078576 PR
19-MAR-1998 US 60/078573,19-MAR-1998 US 60/078578 PR
19-MAR-1998 US 60/078573,19-MAR-1998 US 60/078579 PR
19-MAR-1998 US 60/078581,19-MAR-1998 US 60/078577 PR
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PLANGE 1998 US 60/080312,01-APR-1998 US 60/080313 PI STEVEN
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Ruben,S.M., Ni,J., Rosen,C.A., Yu,G.L., Young,P.E., Fen,P Soppet,D.R., Wei,Y.F., Endress,G.A., Duan,R.D., Kyaw,H., Lafleur,D.W., Olsen,H.S., Shi,Y. and Moore,P.A.
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Patent: JP 2002506627-A 25 HUMAN GENOME SCIENCES INC
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                                                                                                                                      REINHARD EBNER, DAVID W LAFLEUR, HENRIK S OLSEN, YANGGU SHI, PAUL
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Percent Similarity:
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Location/Qualifiers
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/mol_type="genomic DNA"
/db_xref="taxon:9606"
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                                                                                Scores:
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Kroga, H.

Primer for synthesizing full-length cDNA and Patent: JP 2002017375-A 3289 22-JAN-2002;

HELIX RESEARCH INSTITUTE
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1 (Dases 1 to 2120)
Ota,T., Nishikawa,T., Isogai,T., Hayashi,K., Ishii,S., Kawai,Y., Wakamatsu,A., Sugiyama,T., Nagai,K., Kojima,S., Otsuki,T. and
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JP 2002017375-A/3289
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Location/Qualifiers
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JP 2002017375-A/3289
22-JAN-2002
07-JUL-2000 JP 2000253172
                                                                                                                                                                                                                                                                                                                                                                                   TETSUJI OTSUKI, HISASHI KOGA
                                                                                                                                                                                                                                                                                                                                                                                                                         YURI KAWAI,AI WAKAMATSU,TOMOYASU SUGIYAMA,KEIICHI NAGAI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOSHIO OTA, TETSUO NISHIKAWA, TAKAO ISOGAI, KOJI HAYASHI, SHIZUKO
                                                                                                                                       /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
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                                               ProMetLysPheProPheIleLysIleThrTyrGluGluIleProLeuProIleArgAsn 340
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Isogai,T., Ota,T., Nishikawa,T., Hayashi,K., Otsuki,T., Suguki,Y., Nagai,K., Sugano,S., Ishii,S., Kawai-Hio,Y., Saito,K., Yamamoto,J., Wakamatsu,A., Nakamura,Y., Kojima,S., Nagahari,K., Masuho,Y., Ono,T., Okano,K., Yoshikawa,Y., Aotsuka,S., Sasaki,N., Hattori,A., Okumura,K., Iwayanagi,T. and Ninomiya,K.

NEDO human cDNA sequencing project
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Isogai, T. and Otsuki, T.
Direct Submission
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/clone_lib="pLACE1"
/note="cloning vector: ]
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artificial sequences.
1 (bases 1 to 1038)
Sheppard, P.O. and Gilberton, D.G.
Secreted protein which human chromosome
Patent: JP 2001511345-A 12 14-AUG-2001;
ZYMOGENETICS INC
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C12N1/21, C12N5/10, C12P21/02, C12Q1/68, C12N15/00, A61K37/02, C12N5/
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                                                                                                                                                                     MetAspAlaProPheTrpCysAsnGlnGlyAlaAlaCysPhePheGluGlyIleAspAsp
                                                                                                                                                                                                                           LeuLysIleMetHisAspAlaIleGlyPheArgSerThrLeuThrGlyLysAsnTyrThr
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                                     AsnGlnMetAlaLysTrpValLysGlnAspAsnGluThrGlyIleTyrTyrGluThrTrp
                                                                              GTNCAYTGGAARGARAAYGGNACNYTNGTNCARGTNGCNACNATHWSNGGNAAYATGTTY
                                                                                               ValHigTrpLysGluAsnGlyThrLeuValGlnValAlaThrIleSerGlyAsnMetPhe
                                                                                                                                                                                                                                                                      YTNAARATHATGCAYGAYGCNATHGGNTTYMGNWSNACNYTNACNGGNAARAAYTAYACN
                                                                                                                                                                                                                                                                                                                                    GARGINITYMGNYINCARGCNCCNGINIGGGARTTYAARTAYGGNGAYYINYINGGNCAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGCCNGTNCCNTAYAARMGNTTYGAYTTYMGNCCNAARCCNGAYCCNTAYTGYCARGCN
                     AAY CARATGGCNAARTGGGTNAAR CARGAYAAY GARACNGGNATHTAY TAYGARACNTGG
                                                                                                                                              ATGGAYGCNCCNTTYTGGTGYAAYCARGGNGCNGCNTGYTTYTTYGARGGNATHGAYGAY
                                                                                                                                                                                                        ATGGARTGGTAYGARYTNTTYCARYTNGGNAAYTGYACNTTYCCNCAYYTNMGNCCNGAR
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24-UUL-1997 US 60/053613
PAUL O SHEPPARD DIBRA G GILBERTON
C12N15/09,A61K38/00,A61K48/00,C07K14/47,C07K16/18,C12N1/15, PC
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JP 2001511345-A/12
14-AUG-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
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Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,

Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,

Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,

Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,

Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,

Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,

Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,

Abramson, R.D., Mullahy, S.J., Bossk, S.A., McEwan, P.J.,

McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,

Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,

Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,

Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,

Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,

Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,

Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,

Butterfield, Y.S., Krzywinski, M.I., Skalaka, U., Smailus, D.E.,

Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.

Generation and mouse cDNA sequences
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Direct Submission
Submitted (06-MAR-2002) National Institutes of Health, Mammalian Sene Collection (MGC), Cancer Genomics Office, National Cancer
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                                                                                                                Strausberg, R.
                                                                                                                                                                                                                                    human and mouse cDNA sequences Proc. Natl. Acad. Sci. U.S.A.
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neuronal 5, mR
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REMARK
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US-10-010-050A-2 (1-346)
                                                                            Best Local Similarity:
Query Match:
                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                     Percent Similarity:
                                                                                                                                                              Score:
                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
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Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Lothar Hennighausen Ph.D., Robin Humphre
CDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
Gaithersburg, Maryland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov/
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Akhter,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Gupta,J., Haghighi,P.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D., McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/Lill at: http://image.llnl.gov Series: IRAK Plate: 56 Row: c Column: 7 This clone was selected for full length sequencing because it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Institute, 31 Center Drive, Room 11A03, Bethesda, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the following selection criteria: Hexamer
                                                                                                                                                                                                                                                                                                                                                    /db_xref="locusid:211286"
/db_xref="MGI:214286"
/db xxef="MGI:2442253"
/db xxef="MGI:2442253"
/tzanslation="Treathurrellalialialialialiasptsgorwpydykreserrky
/tzanslation="Treathurrellaliasptwickers
DPYCQAKYTFCPTGSPIPVMKDNDVIEVLRLQAPIWEFKYGDLLGHFKLMHDAVGFRS
DTYTGKYYIEWYELFQLGNCTFPHLREDKSAPFWCNQGAACFFEGIDDKHWKENGTLK
VVATISGNTERKVARWKQDNETGIYSETWTAAGFGGGAGYWFESYDCSUFVLRTXK
KLABFGTEFKKIETNYTKIFLYSGEPIYLGNETSIFGFKGNKTLALAIKKFYGPFRPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=3
/product="Cln5 protein"
/protein_id="AAH25487.1"
/db_xref="GI:19343791"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                           LSTKDFLMNFLKIFDTVI IHRQFYLFYNFEYWFLPMKPPFVKITYEETPLPTRHTTFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="Cln5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tissue_type="Mammary tumor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene="Cln5"
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1451.00
85.76%
76.56%
75.30%
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         type="mRNA
BC025487 (1-2318)
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Matches:
                                                                                                           Mismatches:
                                                                                                                                  Conservative:
                                                                                  Indels:
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frequency ORF
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                                                    AC109554 198524 bp DNA linear Rattus norvegicus clone CH230-331D3, *** SEQUENCING
AC109554.4
              AC109554
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlyAlaAlaCysPhePheGluGlyIleAspAspValHisTrpLysGluAsnGlyThrLeu
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCGCACTGGCGCCCCGGCGCTCGCGCGCTCGGGCTGGCGACGATTCTGGGCGCG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspAsnGluThrGlyIleTyrTyrGluThrTrpAsnValLysAlaSerProGluLysGly 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAGTCGTTGCAACCATATCCGGAAACACATTTAACAAAGTGGCCGAGTGGGTGAAGCAG
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                                                                                                                                                                                      ThrTyrGluGluIleProLeuProIleArgAsnLysThrLeuSerGlyLeu 346
                                                                                                                                                                                                                                    TyrLeuDheTyrAsnPheGluTyrTrpPheLeuProMetLysPheProPheIleLysIle
                                                                                                                                                                                                                                                                                                                     LysGluPheLeuLeuSerLeuLeuGlnIlePheAspAlaValIleValHisLysGlnPhe
                                                                                                                                                                                                                                                                                                                                                                                                     AAGACTCTTGCTTTGGCCATAAAAAATTTTATGGCCCCTTCAGACCGTATTTGTCAACC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TACAGTGGAGAGCCTATTTACCTGGGAAATGAAACATCTATTTTTGGGCCCCAAAGGAAAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACAATGAAACTGGGATTTATTATGAGACATGGACGGTCCGAGCCGGCCCAGGACAAGGG
                                                                                                                                                        ACATACGAAGAAACCCCGTTACCTACCCGACATACAACATTTACCGACTTG 1010
GI:23820683
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IN PROGRESS
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RATTUS norvegicus (Norway rat)
Rattus norvegicus
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                            Submitted (05-FBB-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA 3 (bases 1 to 198524) Rat Genome Sequencing Consortium.
Submitted (11-OCT-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA On Oct 11, 2002 this sequence version replaced gi:21738217. The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas
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                               38632 GGTGGAGCGCACTGGCGCCAGGCGCTCGCGCTGGCGCTACTGGGGGCTGGCCGCCCACTCTG
                                                                                                                                                                                                                                                                                                           Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence only contigs will be indicated in the feature
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.)
NOTE: This is a 'working draft' sequence. It currently consists of 1 contigs. Gaps between the contigs are represented as runs of N. The order of the pieces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     by the finished sequence as soon as it is available the accession number will be preserved.

1 198524: contig of 198524 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        is believed to be correct as given, however the sizes of the gaps between them are based on estimates that have provided by the submittor.
This sequence will be replaced
                                                         GlyArgAlaSerTrp-----CysTrpAlaLeuAlaLeuLeuTrpLeuAlaValValPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Center clone name: CH230-331D3
------ Summary Statistics
Assembly program: Phrap, version 0.990329
Consensus quality: 177481 bases at least Q40
Consensus quality: 179640 bases at least Q30
Consensus quality: 181141 bases at least Q20
Estimated insert size: 183954; sum-of-contigs estimation
Quality coverage: 6x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: hgsc-help@bcm.tmc.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Center: Baylor College of Medicine Center code: BCM
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197370...198217
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/mol_type="genomic DNA"
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clone_end:T7
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Matches:
Conservative:
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Indels:
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Rattus norvegicus clone CH230-138J6,
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                                                                                                                                                                                                                                                                                                                                                         GlnPheTyrLeuPheTyrAsnPheGluTyrTrpPheLeuProMetLysPheProPheIle 327
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                                                                                                Submitted (13-MAY-2003) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA On May 13, 2003 this sequence version replaced gi:22855855. The sequence in this assembly is a combination of BAC based reads
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                                                                                                                                                                                                                                                                                                                             Submitted (23-JAN-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA 3 (bases 1 to 227920)
Rat Genome Sequencing Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas
                                                                                                                                                                                                                                                                                                     Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Worley, K.C.
Direct Submission
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Best Local Similarity:
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                                                                                                                            28 GlyTrpSerArgValSerGlyIleProSerArgArgHisTrpProValProTyrLysArg 47
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shotgun sequence only contigs will be indicated in the feature
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Center project name: GPBR
Center clone name: CH230-13806
Center clone name: CH230-13806
Assembly program: Atlas 3.0;
Consensus quality: 214528 bases at least Q40
Consensus quality: 21733 bases at least Q20
Consensus quality: 219064 bases at least Q20
Estimated insert size: 223690; sum-of-contigs estimation
Quality coverage: 6x in Q20 bases; sum-of-contigs estimation
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/db_xref="taxon:10116"
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                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eut Mammalia; Eutheria; Primates; Catarrhini; Hominidae; HG 1 (bases 1 to 697)
Ota, T., Nishikawa, T., Isogai, T., Hayashi, K., Ishii, S., Wakamatsu, A., Sugiyama, T., Nagai, K., Kojima, S., Otsuki,
                                                                                                                                                                                                                                                                                                                     Primer for synthesizing
BD125187
BD125187.1 GI:23220132
JP 2002017375-A/618.
Prīmer for synthesizing full-length cDNA
Patent: JP 2002017375-A 618 22-JAN-2002;
HELIX RESEARCH INSTITUTE
OS Homo sapiens (human)
                                                                                                                                                                                                                                                                Homo sapiens (human)
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full-length
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PD 22-JAN-2002

PF 07-JUL-2000 JP 2000253172

PF 07-JUL-2000 JP 2000253172

PI TOSHIO OTA, TETSUO NISHIKAWA, TAKAO ISOGAI, KOJI HAYASHI, SHIZU

PI ISHII,

PI VURI KAWAI,AI WAKAWATSU, TOMOYASU SUGIYAWA, KEIICHI NAGAI, PI

SHINICHI KOJIWA,

PI TETSUJI OTSUKI, HISASHI KOGA

PC
C12N15/09, C07K14/47, C07K16/18, C12N1/15, C12N1/19, C12N1/21, C12N5/
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Primer for synthesizing full-length cDNA and use thereof FH F
Location/Qualifiers
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07-JUL-2000 JP 2000253172
TOSHIO OTA,TETSUO NISHIKAWA,TAKAO ISOGAI,KOJI HAYASHI,SHIZUKO
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/mol_type="genomic DNA"
/db_xref="taxon:9606"
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BD126453
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OS Homo sapiens (human)
PN JP 2002017375-A/1884
PD 22-JAN-2002
PT 705HIO OTA, TETSUO NISHIKAMA, TAKAO ISOGAI, KOJI HAYASHI, SHIZUKO
PI TOSHIO OTA, TETSUO NISHIKAMA, TAKAO ISOGAI, KOJI HAYASHI, SHIZUKO
PI ISHII,
PI YURI KAWAI, AI WAKAMATSU, TOMOYASU SUGIYAMA, KEIICHI NAGAI, PI
SHINICHI KOJIMA,
PI TETSUJI OTSUKI, HISASHI KOGA
PC
C12N15/09, C07K14/47, C07K16/18, C12N1/15, C12N1/19, C12N1/21, C12N5/ PC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ota,T., Nishikawa,T., Isogai,T., Hayashi,K., Ishii,S., Kawai,Y., Wakamatsu,A., Sugiyama,T., Nagai,K., Kojima,S., Otsuki,T. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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JP 2002017375-A/1884.
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                          AAGTATACTTTCTGTCCAACTGGCTCACCTATCCCAGTTATGGAGGGTGATGATGACACT 291
                                                 LysTyrThrPheCysProThrGlySerProIleProValMetGluGlyAspAspAspIle
                                                                                    TGGCCGGTGCCCTGCAAGCGCTTTGACTTCCGTCCAAAACCTGATCCTTATTGTCAAGCT
                                                                                                   TrpProValProTyrLysArgPheAspPheArgProLysProAspProTyrCysGlnAla
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    repeats were identified using RepeatMasker: Smit, A.F.A. &
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101 LeuLysIleMetHisAspAlaIleGlyPheArgSerThrLeuThrGlyLysAsnTyrThr 120
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Hawkins, T.L., Reeve, M.P., Christoffersen, A., Birren, B.W., Rawkins, T.L., Reeve, M.P., Christoffersen, A., Birren, B.W., P., Fasman, K.H., Lander, E.S., McKernan, K., Munro, C., Richardson, P., Barna, N., Chang, A., Cooke, P., Daly, M.J., Forrest, C., Fripp, W.J., Barna, N., Chang, A., Cooke, P., Daly, M.J., Forrest, M., MacKenzie, J., Gage, D., Geralgery, K., Hagos, B., Jacotot, L., Lane, M., MacKenzie, J., Marquis, N., McDermott, J., Moloney, N., Morrow, J., Nachman, A., Marquis, N., McDermott, J., Moloney, N., Rollins, G., Spencer, J., Naylor, J., O'Connor, T., Peterson, K., Rollins, G., Spencer, J., Naylor, J., Stone, C., Strickland, C., Sydney, K., Wilmer, F. and Stilwell, J., Stone, C., Strickland, C., Sydney, K., Wilmer, F.
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Genomic sequence from Human 13,
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Submitted (29-MAY 1997) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On May 29, 1997 this sequence version replaced gi:1932720. The Staden databases, finishing information, and all chromatographic files used in the assembly of this clone are available from our anonymous ftp site.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (10-APR-1997) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA
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repeat_region 1508015373 - /rpt_family="AluJb" repeat_region 158801581 - 1580	repeat_region 1403514316 /rpt family="AluSx" repeat_region complement(1501815046) /rpt family="AT rich"	_region	_region	repeat_region 1020810787 repeat_region 1020811297 repeat_region 1098411297	repeat region 98609946 /rpt family="MIR2"	repeat_region 9340. 9564 /rot family="AluJo"	region	repeat_region 84808639	repeat_region complement(8363) repeat_region complement(8363.391)	· 22 🚡		repeat_region 7394. 7455	repeat_region complement(6838.7140) repeat_region complement(6838.7140)	repeat region complement(6341. (6435)		repeat_region 52535385	repeat_region 43614640 ''TET TABLE TABLE TO THE TABLE) xpt	repeat_region 2779 .2946	/rpt 1970	repeat_region 16321920				repeat_region complement(113200) /rpt family="THE1B"	/clone="76N15" /clone_lib="unknown"	/db_xret="taxon:9606" /chromosome="13"		rce	Green, P. (1996-1997) http://ftp.genory.oualifiers incaring/Oualifiers	
/rpt_family="AT_rio t_region 505251121 /rpt_family="MERSA" t_region complement(52140 /rpt_family="AluJo"	<pre>/rpt_family="Al complement (4982 /rpt_family="Al complement (5016</pre>	 /rpt family="AT ric t_region complement(47411 /rpt family="AT ric	repeat_region 44544. 45246 /rpr family="LTRB" repeat region complement(4699947032)	repeat_region complement(44188. 44481) /rpt_family="Alusc"	region	repeat region 4325543427	region	_region 72//2.	region 4246/.	region 42042	r_region /pt_	/rpt_family="Aluse	L_region complement (40741.	L_region complement(30457.	t_region complem	TEGTOT	ין ל	t_region 3148731812 /rpt_family="AluJo"	_region comp	t_region complement(29365 /rpt_family="MIR"	region complement (2000)	/rpt Camily "RIUSq"	region complement (28553.	region	/rpt_f _region 26013.	region	compl	repeat_region complement(23331, 23353)	repeat_region 21238. 21534	repeat_region complement(2018) .20494) /rpt family="FAM"	

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Percent Similarity:
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                                                                      Homo sapiens (human)
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                  Homo sapiens chromosome 13 clone RP11-185124, 14 unordered
                                                                                                                          HTG; HTGS_PHASE1; HTGS_CANCELLED
                                                                                                                                                           AL136440.2 GI:10039473
                                                                                                                                                                                             AL136440
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54225. .54348
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complement(54755. .54782)
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On Sep 8, 2000 this sequence version replaced gi:6982057.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Assembly program: XGAP4; version 4.5
Sequencing vector: plasmid; L08752; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Consensus quality: 162085 bases at least Q40
Consensus quality: 164521 bases at least Q30
Consensus quality: 166040 bases at least Q20
Insert size: 168062; sum-of-contigs
Insert size: 168062; sum-of-contigs
Insert size: 164996; 1.7% error; agarose-fp
Quality coverage: 4.08x in Q20 bases; sum-of-contigs Quality
coverage: 4.16x in Q20 bases; agarose-fp
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        as soon as it is available and the accession number will be preserved.
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               vector_side:left"
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clone_end:T7_
                                                                                                                                                                                                                                                                                        organism="Homo sapiens"
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93413: contig of 25693 bp in length
93513 gap of 100 bp
114081: contig of 20568 bp in length
114181: gap of 100 bp
126206: contig of 12025 bp in length
126306: gap of 100 bp
144583: contig of 18277 bp in length
144683: gap of 100 bp
147136: contig of 2453 bp in length
147236: gap of 100 bp
164925: contig of 17689 bp in length
165025: gap of 100 bp
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  GAACCTACTTATCTGGGAAATGAAACATCTGTTTTTGGGCCAACAGGAAACAAGACTCTT
                       GluProThrTyrLeuGlyAsnGluThrSerValPheGlyProThrGlyAsnLysThrLeu
                                                    TTTGGAGCAGAGTTCAAGAACATAGAAACCAACTATACAAGAATATTTCTTTACAGTGGA
                                                                           PheGlyAlaGluPheLysAsnIleGluThrAsnTyrThrArgIlePheLeuTyrSerGly
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Insert size: 245987; sum-of-contigs
Insert size: 190986; agarose-fp
Quality coverage: 2.52x in Q20 bases; sum-of-contigs Quality
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Assembly program: XGAP4; version 4.5
Sequencing vector: plasmid; 100752; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Consensus quality: 230597 bases at least Q30
Consensus quality: 234299 bases at least Q30
Consensus quality: 241103 bases at least Q20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (12-JUN-2001) Sanger Centre, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk
On Aug 22, 2000 this sequence version replaced gi:8894433.
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HTG; HTGS_PHASE1; HTGS
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                             NOTE: This is a 'working draft' sequence. It currently consists of 53 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GluIleProLeuProIleArgAsnLysThrLeuSerGlyLeu 346
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5690
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                contig of 2130 bp in 1
gap of 100 bp
contig of 3459 bp in 1
gap of 100 bp
contig of 4257 bp in 1
gap of 100 bp
contig of 2478 bp in 1
gap of 100 bp
contig of 6269 bp in 1
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contig of 7843 bp in 1
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contig of 7843 bp in 1
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171996: gap of 100 bp 184915: contrig of 12919 185015: gap of 100 bp 187238: contrig of 2223 187338: gap of 100 bp 189602: contrig of 264 189702: gap of 100 bp 194463: contrig of 4761 194563: gap of 100 bp 194563: gap of 100 bp	152258: contig 153258: gap of 156922: contig 157022: gap of 160153: contig 160253: gap of 164334: contig 164334: gap of 164600: contig 166700: gap of 16710: gap of	118593: contig of 2938 bp in 118693; gap of 100 bp 123530; contig of 4837 bp in 123530; gap of 100 bp 123630; gap of 100 bp 127187; gap of 100 bp 129784; gap of 100 bp 129784; gap of 100 bp 132132; contig of 2348 bp in 132232; gap of 100 bp 132232; gap of 100 bp 143792; contig of 4874 bp in 148766; contig of 4874 bp in 148866; gap of 100 bp	93400: gap of 100 bp 95619: contig of 2139 bp in 95719: gap of 100 bp 100592: contig of 4873 bp in 100592: gap of 100 bp 1004059: gap of 100 bp 1004059: gap of 100 bp 110871: contig of 6812 bp in 110871: gap of 100 bp 115555: contig of 4584 bp in 115655: gap of 100 bp	contig gap of contig gap of contig gap of contig gap of contig gap of	32230: contig of 32230: gap of 10 3535: gap of 10 35253: gap of 10 37649: contig of 37749: gap of 10 40245: contig of 40345: gap of 10 48520: gap of 10 52169: contig of 52169: contig of 55643: gap of 10 56643: gap of 10
misc_feature 5227056443 /note="assembly_fragment:00009 fragment_chain:5" misc_feature 5654463088 /note="assembly_fragment:00448 fragment_chain:5" misc_feature 6318965281 /note="assembly_fragment:00027				234942: contig 235042: gap of 1 240958: contig 240958: contig 241058: gap of 1 241058: gap of 1 251187: contig 251187: contig 251187: done sapi 251187" Homo sapi 27ganism="Homo sapi 27ga	gap of contig gap of contig gap of gap of contig

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Sequence split into 4
Fragment Name
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AE014175 1
AE014175 2
AE014175 3
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                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 404829)
                                                                                                                                                                                       Mus musculus piebald complete sequence. AE014175 AE013600
Functional and comparative genomic analysis of the piebald deletion
                                Peterson, K., King, B., Hagge-Greenberg, A.,
                                                                                                                                                                          AE014175.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ThrGlyIleTyrTyrGluThrTrpAsnValLysAlaSerProGluLysGlyAlaGluThr
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                      Brien, T
                                                                                                                                      musculus (house mouse)
                                                                                                                 musculus
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173
                                        Roix, J.,
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AUTHORS
TITLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (31-MAY-2002) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA
The strings of n's in this record represent gaps between contigs, and the length of each string corresponds to the length of the gap except where there are 20 n's. A string of 20 n's represents a gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   region of mouse chromosome 14
Genomics 80 (2), 172 (2002)
22150871
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Adams, M. and Mural, R.
Direct Submission
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="Fbl3a" / product="leucine-rich repeat-containing FBL3A"
                                                                                                                                                                                                                                                                                                                   /tranelation="rmkrggrdsdqdsaeegtaekkrprttqersqpcdwgnllqdi
vlhytektplldrahasqvcmwnqvehmpdlwrcfeefelnopatsyllatheelikq
iikrhenhlqyvsfkvdsskesaeacdilsqlvncslktlglistaresfmdlpksh
fisaltyvfvnskslsskiddtpuddpslkylvannsdtlkilkmsscphyspagil
cvadqchglrelalnyhllsdelllalssekhyrlehlridvsenpgqthfhtiqks
swdafikhspkvnlumyfflyeeefdpffreifiathlyfgrsvskyvlgrvchtcrr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement (<73858. .>86476)
/gene="Fbl3a"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product="ceroid-lipofuscinosis, neuronal 5"
/note="partial transcript derived from alignment
tentative consensus sequence TC227789, from TIGR
Gene Index (v. 6.0)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <61259. .>68607
/gene="Cln5"
join(<61259. .61421,62721. .62886,64274.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product="leucine-rich repeat-containing
FBL3A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement (join (73858. .74501, 80293.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement (join (<73858. .74501, 80293. .80464, 83295. .83417,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66916. .>68607)
                                                                                                                      /note="PAM, protein associated with Myc; partial transcript derived from alignment of Homo sapien. RefSeq sequence NM_015057"
                                                                                                                                                                                                                                                                            LVELVVCANGLRELLERIAERCKNLSAIGLGECEVSCSAFVEFVKMCGGRLSQLS
IMEEVLIPDQKYSLEQIHWEVSKHLGRVWFPDMMPTW"
                                                                                                                                                                                                                                                          complement (<106136. .>339446)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             product="immuneoresponsive gene 1"
/note="partial transcript sequence derived from alignment
to GenBank Accession Number L38281"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="Irg1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /map="Mit164-Mit165"
<38137. .>47216
                                                                                                                                                                                                                 complement (<106136. .>339446)
                                                                                                                                                                                                                                                                                                                                                                                                                                   protein_id="AAM92567.1"
|db_xref="GI:22128030"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene="Fbl3a"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene="Irg1"
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db_xref="taxon:10090"
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	uIleProLeu 336 	rAsnPheGlu 315 TAACTTTGAG 67334	uLeuSerLeu 295 ::::: GATGAATTTC 67274	YLeuAlaIle 275 TTTGGCCATA 67214	uProThrTyr 256 GCCTATTTAC 67154	eGlyAlaGlu 236 TGGAACAGAA 67094	pPheAspSer 216 ::: grrcgAgrcc 67034	rGlyIleTyr 196 GGGATTTAT 66974		

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1 (bases 1 to 1486)
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                                                     AsnCysThrPheProHisLeuArgProGluMetAspAlaProPheTrpCysAsnGlnGly
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            AlaAlaCysPhePheGluGlyIleAspAspValHisTrpLysGluAsnGlyThrLeuVal
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 Homo sapiens (human)
JP 2001511345-A/1
14-AUG-2001
24-JUL-1998 JP 2000504249
24-JUL-1997 US 60/053613
PAUL O SHEPPARD, DIBRA G GILBERTON
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 4080)

Savukoski, Klockars, T., Holmberg, V., Santavuori, P., Lander, E.S.
                                                                                                                                                                                                                                                                                                                                                                                     CIN5, a novel gene encoding a putative transmembrane protein mutated in Finnish variant late infantile neuronal ceroid
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                                                                                                                                                Submitted (26-MAY-1998) Department of Human Molecular Genetics, National Public Health Institute, Mannerheimintie 166, Helsinki 00300, Finland
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                                                                                                                                                                                                              Direct Submission
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Nat. Genet. 19 (3),
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/mol type="mRNA"
/db xref="taxon:9606"
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/map="13q22"
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SerGlyGluProThrTyrLeuGlyAsnGluThrSerValPheGlyProThrGlyAsnLys
                                                                                                                          GluThrTrpPheAspSerTyrAspCysSerLysPheValLeuArgThrPheAsnLysLeu
                                                                                                                                                                                    AsnGluThrGlyIleTyrTyrGluThrTrpAsnValLysAlaSerProGluLysGlyAla 180
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                                                                AlaGluPheGlyAlaGluPheLysAsnIleGluThrAsnTyrThrArgIlePheLeuTyr
                                                                                                       GAGACATGGTTTGATTCCTACGACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAGTTG
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SYDCSKFVLRTFNKLAEFGAEFKNIETNYTRIFLYSGEPTYLGNETSVFGPTGNKTLG
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95 human
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PR 19-MAR-1998 US 60/078573,19-MAR-1998 US 60/078576 PR
19-MAR-1998 US 60/078573,19-MAR-1998 US 60/078578 PR
19-MAR-1998 US 60/078573,19-MAR-1998 US 60/078578 PR
19-MAR-1998 US 60/078573,19-MAR-1998 US 60/078577 PR
19-MAR-1998 US 60/078563,01-APR-1998 US 60/080314 PR
01-APR-1998 US 60/078563,01-APR-1998 US 60/080313 PI STEVEN
M RUBEN,JIAN NI, CRAIG A ROSEN,GUO
LIANG YU, PAUL E YOUNG,
PI PING FENG,
PI DANIEL R SODPET, YING FEI WEI, GREGORY A ENDRESS, ROXANNE D DUAN,
PI HAA KYAW,
PI HAA KYAW,
PI REINHARD EBNER, DAVID W LAFLEUR, HENRIK S OLSEN, YANGGU SHI, PAUL
PI A MOORE
PC C12N1/15,
PC C12N1/15,
PC C12N1/15,
C12N1/19,C12N1/21,C12N5/10,C12P21/02,C12Q1/68,G01N33/53,G01N33/ PC
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PN 7 20025066
PD 05-WAR-2002
PF 18-WAR-1999
PR 19-WAR-1998 US
N-APR-1998 US
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Ruben, S.M., Ni, J., Rosen, C.A., Yu, G.L., Young, P.E., Fen, P. Soppet, D.R., Wei, Y.F., Endress, G.A., Duan, R.D., Kyaw, H., I Lafleur, D.W., Olsen, H.S., Shi, Y. and Moore, P.A.
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Patent: JP 2002506627-A 25 05-MAR-2002;
HUMAN GENOME SCIENCES INC
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Mammalia; Eutheria; Primates;
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19-MAR-1998 US 60/0785
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DANIEL R SOPPET, YING FEI WEI, GREGORY A ENDRESS, ROXANNE D DUAN,
HLA KYAW,
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C12N15/09,A61K38/00,A61K48/00,A61P43/00,C07K14/47,C07K16/18,
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secretory proteins.
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                                                                                                                                                                              SerGlyGluProThrTyrLeuGlyAsnGluThrSerValPheGlyProThrGlyAsnLys 240
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                                     LeuPheTyrAsnPheGluTyrTrpPheLeuProMetLysPheProPheIleLysIleThr 300
                                                                                   GluPheLeuLeuSerLeuUeuGlnIlePheAspAlaVallleValHisLysGlnPheTyr 290
                                                                                                                 ACTOTTGGTTTAGCCATAAAAAGATTTTATTACCCCTTCAAACCACATTTGCCAACTAAA
                                                                                                                             ThrLeuGlyLeuAlaIleLysArgPheTyrTyrProPheLysProHisLeuProThrLys 250
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TyrGluGluIleProLeuProIleArgAsnLysThrLeuSerGlyLeu 316
                                                                     GAATTTCTGTTGAGTCTCTTGCAAATTTTTGATGCAGTGATTGTGCACAAACAGTTCTAT
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DB:
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Best Local Similarity:
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OS Homo sapiens (human)
PN J002017375-A/3289
PD 22-JAN-2002
PF 07-JUL-2000 JP 2000253172
PF 07-JUL-2000 JP 2000253172
PI TOSHIO OTA, TETSUO NISHIKAWA, TAKAO ISOGAI, KOJI HAYASHI, SHI
PI TSHII, KAWAI, AI WAKAWATSU, TOMOYASU SUGIYAMA, KEIICHI NAGAI,
SHINICHI KOJIMA,
PI TETSUJI OTSUKI, HISASHI KOGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 2120)

Ota, T., Nishikawa, T., Isogai, T., Hayashi, K., Ishii, S., Kawai, Y., Wakamatsu, A., Sugiyama, T., Nagai, K., Kojima, S., Otsuki, T. and
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JF 2002017375-A/3289.
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Primer for synthesizing
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Primer for synthesizing full-length cDNA and use thereof FH I
Location/Qualifiers
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                                                                                GluPheLysTyrGlyAspLeuLeuGlyHisLeuLysIleMetHisAspAlaIleGlyPhe 80
                                                                                                                              ATCCCAGTTATGGAGGGTGATGATGACACTGAAGTTTTTCGATTACAAGCCCCAGTATGG
                     ArgSerThrLeuThrGlyLysAsnTyrThrMetGluTrpTyrGluLeuPheGlnLeuGly 100
                                                              | IleProValMetGluGlyAspAspAspIleGluValPheArgLeuGlnAlaProValTrp
   CDS
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TOSHIO OTA, TETSUO NISHIKAWA, TAKAO ISOGAI, KOJI HAYASHI, SHIZUKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
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Inpubliance (Dases 1 to 2120)
2 (Dases 1 to 2120)
2 (Dases 1 to 2120)
3 (Submission Submitted (25-MAR-2002) Takao Isogai, Helix Research Institute, Submitted (25-MAR-2002) Takao Isogai, Helix Research Institute, Genomics Laboratory, 1532-3 Yana, Kisarazu, Chiba 292-0812, Japan (B-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3985)
(B-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3985)
                                                                                                                                          Isogai,T., Ota,T., Nishikawa,T., Hayashi,K., Otsuki,T., Suguki,Y., Nagai,K., Sugano,S., Ishii,S., Kawai-Hio,Y., Saito,K., Namamoto,J., Wakamatsu,A., Nakamura,Y., Kojima,S., Nagahari,K., Masuho,Y., Ono,T., Okano,K., Yoshikawa,Y., Aotsuka,S., Sasaki,N., Hattori,A., Okumura,K., Iwayanagi,T. and
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Primates;
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/clone="PLACE1003407"
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/note="cloning vector: ]
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Secreted protein which human chromosome 13
Patent: UP 2001511345-A 12 14-AUG-2001;
ZYMOGENETICS INC
OS Artificial Sequence
PN JP 2001511345-A/12
PD 14-AUG-2001
PF 24-JUL-1998 JP 2000504249
PF 24-JUL-1997 US 60/053613
PR 24-JUL-1997 US 60/053613
PAUL O SHEEPPARD, DIBRA G GILBERTON
PC C12N15/09, A61X38/00, A61K48/00, C07K14/
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24-JUL-1998 JP 2000504249
24-JUL-1997 US 60/053613
24-JUL-1997 US 60/053613
PAUL O SHEPPARD, DIBRA G GILBERTON
C12N15/09, A61K38/00, A61K48/00, C07K14/47, C07K16/18, C12N1/15,
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/db_xref="taxon:32630"
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                                                                                                                                           Mus musculus cer
IMAGE:5251891), J
BC025487
BC025487.1 GI:1
                                                                                                                                                                                                    BC025487
       Strausberg,R.L., Feingold,E.A., Grouse,L.H., Derge,J.G., Klausner,R.D., Collins,F.S., Wagner,L., Shenmen,C.M., Schuler,G.D., Altschul,S.F., Zeeberg,B., Buetow,K.H., Schaefer,C.F., Bhat,N.K.,
                                                 Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia; 1 (bases 1 to 2318)
                                                                                                               Mus musculus
                                                                                                Mus musculus
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                                                                                                                                                                                                                                                                                     GluGluIleProLeuProIleArgAsnLysThrLeuSerGly
                                                                                                                                                                                                                                                                                                                            TTYTAYAAYTTYGARTAYTGGTTYYTNCCNATGAARTTYCCNTTYATHAARATHACNTAY
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                                                                                                                                                                   2318 bp ceroid-lipofuscinosis, 1), partial cds.
                                                                                                               (house mouse)
                                                                    Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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neuronal 5, mRNA (cDNA clone
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tissue Procurement: Lothar Hennighausen Ph.D., Robin Humphr, cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: National Institutes of Health Intramural Sequencing Center (NISC),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LIMI at: http://image.llnl.gov Series: IRAK Plate: 56 Row: c Collumn: 7
This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaithersburg, Maryland;
Web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov
Contact: nisc_mgc@nhgri.nih.gov
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Blakesley,R.W., Bouffard,G.G., Breen,X., Gupta,J., Haghighi,P.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D., McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M., Wetherby,K.D., Wiggins,L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
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Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
22388257
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             analysis.
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USA
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/gene="Cln5"
/codon_start=3
/product="Cln5 protein"
                                                                                                                                                                                          /db_xref="MGI:2442253"
                                                                                                                                                                                                                                                                                                                                                                                               /note="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="Mammary tumor.
                                                                                                                                                                                                                                                          /gene="Cln5"
/db_xref="LocusID:211286"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'db_xref="taxon:10090"
'clone="IMAGE:5251891"
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/strain="C57BL/6J"
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_host="DH10B"
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/protein_id="AAH25487.1" /db_xref="GI:19343791" /db_xref="GI:19343791" /db_xref="MGI:244253" /db_xref="MGI:244253" /translation="TRPAHWRPALALALIGLATILGASPTSGORWPVPYKRFSFRFKT /translation="TRPAHWRPALALALIGLATILGASPTSGORWPVPYKRHDAVGFRS DPYCOAKYTFCFTGSJIPYMKONDVLEVLRLOADIWEBKYGDLGHFKLMHDAVGFRS TLYGKNYTLEWYBLFOLGNCTFSHLRDFKSAPFWCNQGAACFBEGIDDKHWKENGTLS TLYGKNYTLEWYBLFOLGNCTSTSTYSTWFTAGBTGGGAQTWFESYDCSNFVLRTYK KLAEFGTEFKKIETNYTKLFLYSGFFTYLGNETSIFOFKGNKTLALAIKKFYGFFRFY LSTKDFLMNFLKIFDTVIIHROFYLFYNFSYWFLPMKPFYKKITYEETPLPTRHTTFT DL"
ment Scores: 1.12e-135 Length: 2318 .NO.: 1.423.00 Matches: 246 .nt Similarity: 89.03* Conservative: 30 .cocal Similarity: 79.35* Mismatches: 34 . Match: 80.94* Indels: 0 . Match: 10 Gaps: 0
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7 SerArgArgHisTrpProValProTyrLysArgPheAspPheArgProLysProAspPro 26
27 TyrCysGlnAlaLysTyrThrPheCysBroThrGlySerProIleProValMetGluGly 46
47 AspAspAspIleGluValPheArgLeuGlnAlaDroValTrpGluPheLysTyrGlyAsp 66 :::
67 LeuLeuGlyHisLeuLysIleMetHisAspAlaIleGlyPheArgSerThrLeuThrGly 86
87 LysasnTyrThrMetGluTrpTyrGluLeuPheGlnLeuGlyAsnCysThrPheProHis 106
107 LeuArgProGluMetAspAlaProPheTrpCysAsnGlnGlyAlaAlaCysPhePheGlu 126
127 GlyIleAspAspValHisTrpLysGluAsnGlyThrLeuValGlnValAlaThrIleSer 146
147 GlyasnMetPheAsnGlnMetAlaLysTrpValLysGlnAspAsnGluThrGlyIleTyx 166
167 TYTGluThrTrpAsnValLysAlaSerProGluLysGlyAlaGluThrTrpPheAspSer 186
187 TyraspCysSerLysPheValLeuArgThrPheAsnLysLeuAlaGluPheGlyAlaGlu 206
207 PheLysasnileGluThrasnTyrThrargIlePheLeuTyrSerGlyGluProThrTyr 226 :::
227 LeuglyAsngluThrSerValPheGlyProThrGlyAsnLysThrLeuglyLeuAlaIle 246
247 LysArgPheTyrTyrProPheLysProHisLeuProThrLysGluPheLeuLeuSerLeu 266

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Nazy, Narie, Merzker, M. Lee., Abramzon, S., Adams, C., Alder, J., Allen, C., Allen, H., Alsbrooke, S., Amin, A., Angulano, D., Allen, C., Allen, H., Alsbrooke, S., Amin, A., Angulano, D., Anyalebethi, V., Ayoagi, A., Ayodej, M., Baca, E., Baden, H., Baldwin, D., Bandaranaike, D., Barber, M., Barnstead, M., Benalmed, F., Biswalo, K., Blair, J., Blankenburg, K., Casabar, H., Center, A., Chacko, J., Jackon, J., J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    287
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AC109554.4 GI:23820683
HTG: HTGS_PHASE2; HTGS_DRAFT; HTGS_ENRICHED
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On Oct 11, 2002 this sequence version replaced gi:21738217.
On Oct 11, 2002 this sequence version replaced gi:21738217.
On Oct 11, 2002 this sequence version replaced gi:21738217.
On Oct 11, 2002 this sequence version replaced gi:21738217.
On Oct 11, 2002 this sequence or back based reads and whole genome shotgun sequencing reads assembled using Atlas and whole genome shotgun sequence ontig a combination of BAC based reads in the feature table below represents a Scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, and separated individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence only contigs will be indicated in the feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wright,D., Wright,R., Wu,J., Yakub,S., Yen,J., Yoon,L., Yoon,V Yu,F., Zhang,J., Zhou,J., Zhou,X., Zhao,S., Dunn,D., von Niederhausern,A., Weiss,R., Smith,D.R., Holt,R.A., Smith,H.O., Weinstock,G. and Gibbs,R.A.
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Direct Submission
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).

NOTE: This is a 'working draft' sequence. It currently consists of 1 contigs. Gaps between the contigs are represented as runs of N. The order of the pieces is believed to be correct as given, however the sizes of the gaps between them are based on estimates that have provided by the submittor.

This sequence will be replaced by the finished sequence as soon as it is available and the contign.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the accession number will be preserved.
1 198524: contig of 198524 bp in length
Location/qualifiers
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Center clone name: GYLY30-331D3
Center clone name: CH230-331D3
Assembly program: Phrap; version 0.990329
Assembly program: Phrap; version 1.990329
Consensus quality: 177481 bases at least Q40
Consensus quality: 179440 bases at least Q30
Consensus quality: 181141 bases at least Q20
Estimated insert size: 183954; sum-of-contige estimation
Estimated insert size: 183954; sum-of-contige estimation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Quality coverage: 6x in Q20 bases; sum-of-contigs estimation
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                                                                               /note="clone_boundary
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                                                                        site:MboI
                                                                                                                                                                                                                                                                                                                                                    /organism="Rattus norvegicus"
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/db_xref="taxon:10116"
                                    end_sequence:RXAPC14TJ"
                                                                                                                                                                                                                                                  /note="wgs_end_extension
                                                                                                                                                                                                                                                                                                                clone="CH230-331D3"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SerArgArgHisTrpProValProTyrLysArgPheAspPheArgProLysProAspPro 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LysAsnTyrThrMetGluTrpTyrGluLeuPheGlnLeuGlyAsnCysThrPheProHis 106
                                                                               LysArgPheTyrTyrProPheLysProHisLeuProThrLysGluPheLeuLeuSerLeu
                                                                                                                                               LeuGlyAsnGluThrSerValPheGlyProThrGlyAsnLysThrLeuGlyLeuAlaIle 246
                                                                                                                                                                                                                                                           TACGACTGTTCGAATTTTGTCTTAAGGACATATGAGAAATTTGGCTGAATTTGGAACAGAA 37958
                                                                                                                                                                                                                                                                          TyrAspCysSerLysPheValLeuArgThrPheAsnLysLeuAlaGluPheGlyAlaGlu 206
                                                                                                                                                                                                                                                                                                                           TACGAGACATGGACAGTCCGGGCCAGCCCAGGAAAAGGGGGCGCAGACATGGTTTGAATCC 38018
                                                                                                                                                                                                                                                                                                                                       TyrGluThrTrpAsnVallysAlaSerProGluLysGlyAlaGluThrTrpPheAspSer 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAATTTACGATAAACACTGGAAGGAAAACGGGACGTTGTCTCTGGTTGCAACCATATCC 38.38
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||||:::||||||| ||| ||| ||| :::
AAAAAATTTTACGGCCCCGTCAACGGTATTCGTCAACCAAAGATTTTCTGTTGAATTTC 37778
                                                                                                                                                                                         TTCAAGAAGATAGAAACAAACTATATGAAAATATTTCTTTACAGCGGAGAACCGATTTAC
                                                                                                                                                                                                            PheLyBAsnIleGluThrAsnTyrThrArgIlePheLeuTyrSerGlyGluProThrTyr 226
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                                                                                                                              TTGGGAAATGAAACGTCTATTTTTGGGCCCAAAGGAAACAAGACCCTTGCTTTGGCCATA
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/note="clone_boundary
clone_end:Sp6
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1396.00
88.39%
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79.41%
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QY 287 Db 37717	87 TYTTTPPHOLOUPROMELLYSPHOETOPHELIGLYSIIGTHTYTGLUGLUILEPTOLEU 306
Qy 307 Db 37657	07 ProlleArgAsnLysThrLeuSerGlyLeu 316
RESULT 9 AC107510 LOCUS DEFINITION	AC107510 227920 bp DNA linear HTG 13-MAY-2003 Rattus norvegicus clone CH230-138J6, *** SEQUENCING IN PROGRESS ***, 4 unordered pieces.
ACCESSION VERSION KEYWORDS SOURCE	10.5 GI:3
ORGANISM	Rattus norvegicus Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Partus
REFERENCE AUTHORS	Rattus. 1 (bases 1 to 227920) 1 (bases 1 to 227920) Muzny, D. Marie., Metzker, M.Lee., Abramzon, S., Adams, C., Alder, J., Allen, C., Allen, H., Alsbrooks, S., Amin, A., Anguiano, D., Allen, C., Allen, H., Alsbrooks, S., Amin, A., Anguiano, D.,
	Aoyagi, A., Ayodeji, M., Baca, B., Baden, H., andaranaike, D., Barber, M., Barnstead, M., Benahmed lair, J., Blankenburg, K., Blyth, P., Brown, M., bay, C., Burch, P., Burrell, K., Calderon, E., Carter, K., Cavazos, I., Ceasar, H., Center, A., Carter, K., Cavazos, I., Ceasar, H., Center, A., Chi.
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	Milosavljevic, A., Miner, G., Minja, E., Montemayor, J., Moore, S., Morgan, M., Morris, K., Morris, S., Munidasa, M., Murphy, M., Nair, L., Nankervis, C., Neal, D., Newton, N., Nguyen, N., Norris, S.,
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	Puzzo, M. Quiroz, J. Rachlin, E. Reeves, K., Regier, M.A., Reigh, R., Reilly, B., Reilly, M., Ren, Y., Reuter, M., Richards, S., Riggs, F.,
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	eczyk, R., Yakub,
	Niederhausern, A., Weiss, R., Smith, D.R., Holt, R.A., Smith, H.O., Weinstock, G. and Gibbs, R.A.
TITLE JOURNAL	Direct Submission Unpublished

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AUTHORS
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Submitted (23-JAN-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence may extend beyond the ends of the clone and there may be sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (13-MAY-2003) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA On May 13, 2003 this sequence version replaced gi:22855855. The sequence in this assembly is a combination of BAC based reads
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 (bases 1 to 227920)
Rat Genome Sequencing Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence only contigs will be indicated in the feature
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NOTE: Estimated insert size may differ from sequence length (see http://www.bgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).

NOTE: This is a 'working draft' sequence. It currently consists of 4 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                       as soon as it
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Center clone name: CH230-138J6
Center clone name: CH230-138J6
Center clone name: CH230-138J6
Center clone name: CH230-138J6
Assembly program: Atlas 3.0;
Consensus quality: 214528 bases at least Q40
Consensus quality: 217333 bases at least Q20
Consensus quality: 219034 bases at least Q20
Estimated insert size: 223690; sum-of-contigs estimation
Quality coverage: 6x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                    223560
223660
224739
224839
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226390
                                                                                   /note="wgs_contig"
222227. .223559
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                                                                                                                                                                                                                                organism="Rattus norvegicus"
                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                           /mol_type="genomic DNA"
/db_xref="taxon:10116"
/clone="CH230-138J6"
                                                                                                                                                                                                                                                       .227920
1.7e-124
1339.00
                                                                                                                                                                                                                                                                                            223559: contig of 223559 bp in length
223659: gap of unknown length
224738: contig of 1079 bp in length
224838: gap of unknown length
226289: contig of 1451 bp in length
226389: gap of unknown length
227920: contig of 1531 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         it is available and the accession number will
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  Length:
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              AC001226.1
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US-10-010-050A-2_COPY_31_346 (1-316) x AC107510 (1-227920)
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Best Local Similarity:
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Genomic sequence from Human 13, AC001226
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Assembly program: XGAP4; version 4.5
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Sequencing vector: plasmid; L08752; 100% of reads
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Consensus quality: 164521 bases at least Q20
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Insert size: 168966; sum-of-contigs
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HTG; HTGS_PHASE1; HTGS_CANCELLED
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Direct Submission
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: humquery@sanger.ac.uk
----- Project Information
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NOTE: This is a 'working draft' sequence. It currently consists of 14 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be updated with the distribution of the gaps are unknown.
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144683: gap of 100 bp
147136: contig of 2453 bp in
147236: gap of 100 bp
164925: contig of 17689 bp i
165025: gap of 100 bp
165025: contig of 4337 bp in
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     Burton, J.
Direct Submission
Submitted (12-JUN-2001) Sanger Centre, Hinxton, Cambridgeshire,
CB10 15A, UK. E-mail enquiriss: humquery@sanger.ac.uk Clone
requests: clonerequest@sanger.ac.uk
                                                                                                                                                                           Homo sapiens chromosome 13 clone
AL359875
AL359875.3 GI:9864226
HTG; HTGS_PHASE1; HTGS_CANCELLED.
Homo sapiens (human)
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Mammalia; |
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fragment_chain:2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Insert size: 245987; sum-of-contigs
Insert size: 190986; agarose-fp
Quality coverage: 2.52x in Q20 bases; sum-of-contigs Quality
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Center code: Si
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: humquery@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Web site: http://www.sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  coverage: 3.92x in Q20 bases; agarose-fp
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/db xref="taxon:9606"
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                         note="assembly_fragment:00469
fragment_chain:1"
                                                      'clone="RP11-453N22"
'clone_lib="RPCI-11.2"
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                                                                                                                                                                              ThrGlyIleTyrTyrGluThrTrpAsnValLysAlaSerProGluLysGlyAlaGluThr 182
GAACCTACTTATCTGGGAAATGAAACATCTGTTTTTGGGCCAACAGGAAAACAAGACTCTT
              GluProThrTyrLeuGlyAsnGluThrSerValPheGlyProThrGlyAsnLysThrLeu 242
                                                                         PheGlyAlaGluPheLysAsnIleGluThrAsnTyrThrArgIlePheLeuTyrSerGly
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                                                      TTTGGAGCAGAGTTCAAGAACATAGAAACCAACTATACAAGAATATTTCTTTACAGTGGA
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fragment_chain:2"
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fragment_chain:2"
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fragment_chain:3"
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fragment_chain:3"
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fragment_chain:4"
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fragment_chain:4"
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fragment_chain:3"
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fragment_chain:4"
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ragment_chain:5"
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fragment_chain:5"
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BD125187
BD125187.1 GI:23220132
JP 2002017375-A/618.
Homo sapiens (human)
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PN 2020173
PD 22-JAN-2002
PF 07-JUL-2000
PI TOSHIO OTA,
PI ISHII
PI YURI KAWAI,
PI YURI KAWAI,
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1 (bases 1 to 697)

Ota,T., Nishikawa,T., Isogai,T., Hayashi,K., Ishii,S., Kawai,Y., Wakamatsu,A., Sugiyama,T., Nagai,K., Kojima,S., Otsuki,T. and
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                                       ArgValSerGlyIleProSerArgArgHisTrpProValProTyrLysArgPheAspPhe 20
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mer for synthesizing full-length cDNA and use thereof FH Key
Location/Qualifiers
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TOSHIO OTA,TETSUO NISHIKAWA,TAKAO ISOGAI,KOJI HAYASHI,SHIZUKO
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/mol_type="genomic DNA"
/db_xref="taxon:9606"
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Homo sapiens (human)
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1 (base 1 to 697)
Ota, T., Nishikawa, T., Tsogai, T., Hayashi, K., Ishii, S., Kawai, Y., Wakamatsu, A., Sugiyama, T., Nagai, K., Kojima, S., Otsuki, T. and
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BD126453
BD126453.1 GI:23221398
JP 2002017375-A/1884.
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HELIX RESEARCH INSTITUTE
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TOSHIO OTA,TETSUO NISHIKAWA,TAKAO ISOGAI,KOJI HAYASHI,SHIZUKO
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JP 2002017375-A/1884
/organism='Homo sapiens (human)'
Location/Qualifiers
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                                                                                               r synthesizing full-length cDNA and use thereof Location/Qualifiers
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complete sequence.
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/mol_type="genomic DNA"
/db_xref="taxon:9606"
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The strings of n's in this record represent gaps between contigs, and the length of each string corresponds to the length of the gap except where there are 20 n's. A string of 20 n's represents a gap of unknown length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Functional and comparative genomic analysis of the piebald deletion region of mouse chromosome 14 Genomics 80 (2), 172 (2002)
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1 (bases 1 to 404829)
Peterson,K., King,B., Hagge-Greenberg,A., Roix,J., Bult,C. and
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/gene="Cln5"
join(<61259. .61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="Irgl"
/product="immuneoresponsive gene 1"
/note="partial transcript sequence derived from
to GenBank Accession Number L38281"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="Irg1"
<38137. .>47
                                                                                                                                                                                                /translation="RWKRGGRDSDQDSAEEGTAEKPKRPRTTQERSQPCDWGNLLQDI
VLHVEKYLPLLDRAHASQVCRNWNQVFHMPDLWRCFEFELNQPATSYLKATHPELIKQ
IIXRHSNHLQYVSFKYDSSKSAEAACDILSQLVNCSLKTLGLISTARPSFMDLPKSH
FISALTYVFVNSKSLSSLKLDDTPVDDPSLKVLVANNSDTLKLLKMSCPFHYSPAGIL
CVADQCHGLRELALNYHLSDELLLALSSEKHVRLEHLRIDVVSENPGQTHFFHTIQKS
SWDAFIKHSPKVNLVMYFFLYEEEFDPFFRYEIPATHLYFGRSVSKDVLGRVGMTCPR
LVELYVCANGLRPLDEELIRLAECKKILSAIGLGECEVSCSAFVEFVKNCGGRLSCLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tentative consensus sequence
Gene Index (v. 6.0)."
complement (<73858. .>86476)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product="ceroid-lipofuscinosis, neuronal 5"
/note="partial transcript derived from alignment
tentative consensus sequence TC227789, from TIGR
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                                                                                                                                                                                                                                                                                                                                                                                                          /product="leucine-rich repeat-containing F-box FBL3A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complement (join (73858. .74501, 80293.
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/gene="Fbl3a"
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/note="PAM, protein associated with Myc; partial transcript derived from alignment of Homo sapien RefSeq sequence NM_015057"
                                                                                                           complement (<106136. .>339446)
                                                                                                                                                          complement (<106136.
                                                                                                                                                                                                                                                                                                                                                             /protein_id="AAM92567.1"
/db_xref="GI:22128030"
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complement(<106136. .>339446)
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xref="taxon:10090"
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                                                                                                                                LeuGlnIlePheAspAlaValIleValHisLysGlnPheTyrLeuPheTyrAsnPheGlu 286
                                                                                                                                                                   AAAAATTTTATGGCCCCTTCAGACCGTATTTGTCAACCAAAGATTTTCTGATGATTTC
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CCTACCCGACATACAACATTTACCGACTTG
                                                     TATTGGTTTCTACCAATGAAACCCCCCTTTGTCAAAATAACATACGAAGAAACCCCCGTTA 67394
                                                                                                              TTGAAAATTTTTGATACAGTGATTATACACAGACAGTTCTACTTGTTTTATAACTTTGAG
                       ProlleArgAsnLysThrLeuSerGlyLeu 316
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SUMMARIES

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OS Homo sapiens (human)
PN JP 2002017375-A/618
PD 22-JAN-2002
PD 22-JAN-2002
PF 07-JUL-2000 JP 200025:
PF TOSHIO CTA, TETSUO NISI
PI ISHII,
PI YURI KAWAI, AI WAKAMAT
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PI TETSUJI OTSI
PC
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Wakamatsu,A., Sugiyama,T., Nagai,K., Kojima,S.,
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1 (bases 1 to 697)
Ota, T., Nishikawa, T., Isogai, T., Hayashi, K., Ishii, S., Kawai, Y., Wakamatsu, A., Sugiyama, T., Nagai, K., Kojima, S., Otsuki, T. and
                                                                                    Homo sapiens (human)
                                                                                                                           BD126453.1 GI:23221398 JP 2002017375-A/1884.
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mer for synthesizing full-length cDNA and use thereof FH K
Location/Qualifiers
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Location/Qualifiers
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Kroga,H.

Primer for synthesizing full-length cDNA and use thereof

Patent: JP 2002017375-A 1884 22-JAN-2002;

HELIX RESEARCH INSTITUTE
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                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1486)
Sheppard, P.O. and Gilberton, D.G.
Secreted protein which human chromosome 13 encodes
Patent: JP 2001511345-A 1 14-AUG-2001;
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Secreted protein which human chromosome 13
BD073402
                                                                                                                                                                                                                                                                                                                         ZYMOGENETICS INC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (human)
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C12N1/21, C12N5/10, C12P21/02, C12Q1/68, C12N15/00, A61K37/02, C12N5/
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TOSHIO OTA,TETSUO NISHIKAWA,TAKAO ISOGAI,KOJI HAYASHI,SHIZUKO
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24-UUL-1998 JP 2000504249
24-UUL-1997 US 60/053613
24-UUL-1997 US 60/053613
PAUL O SHEPPARD, DIBRA G GILBERTON
C12N15/09,A61K38/00,A61K48/00,C07K14/47,C07K16/18,C12N1/15,
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/mol_type="genomic DNA"
/db_xref="taxon:9606"
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st Local Similarity:
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95 human secretory proteins.
BD136338
BD136338.1 GI:23231283
                                                                                     LIANG YU, PAUL E YOUNG,

PI PING FENG,
PI DANIEL R SOPPET, YING FEI WEI, GREGORY A ENDRESS, ROXANNE D DUAN,
PI HLA KYAW,
PI HLA KYAW,
PI KEINHAAD EBNER, DAVID W LAFLEUR, HENRIK S OLSEN, YANGGU SHI, PAUL,
PI A MOORE
PC C12N15/09, A61K38/00, A61K48/00, A61P43/00, C07K14/47, C07K16/18,
PC C12N1/15,
PC C12N1/15,
PC C12N1/15,
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Patent: JP 2002506627-A 25 05-MAR-2002;
HUMAN GENOME SCIENCES INC
OS Homo sapiens (human)
PN JP 2002506627-A/25
PD 05-MAR-2002
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Ruben,S.M., Ni,J., Rosen,C.A., Yu,G.L., Young,P.B., Fen,P.
Soppet,D.R., Wei,Y.F., Endress,G.A., Duan,R.D., Kyaw,H., E
Lafleur,D.W., Olsen,H.S., Shi,Y. and Moore,P.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
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 n equals a,t,g,
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19-MAR-1998 US 60/078566,19-MAR-1998 US

4R-1998 US 60/078573,19-MAR-1998 US

4R-1998 US 60/078579,19-MAR-1998 US

4R-1998 US 60/078581,19-MAR-1998 US

4R-1998 US 60/07853,01-APR-1998 US

4R-1998 US 60/080312,01-APR-1998 US
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|mol_type="genomic DNA"
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AUTHORS
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ORGANISM
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VERSION
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Alignment Scores: Pred. No.:
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Primer for synthesizing full-length cDNA and use thereof Patent: JP 2002017375-A 3289 22-JAN-2002;

HELIX RESEARCH INSTITUTE
OS Homo sapiens (human)
P 002017375-A/3289
PD 22-JAN-2002
22-JAN-2002
22-JAN-2002
22-JAN-2002
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1 (bases 1 to 2120)

Ota,T., Nishikawa,T., Isogai,T., Hayashi,K., Ishii,S., Kawai,Y., Wakamatsu,A., Sugiyama,T., Nagai,K., Kojima,S., Otsuki,T. and
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BD127858.1 GI:23222803
JP 2002017375-A/3289.
                                                                                                                                                                                                                                                          PI YURI KAWAI,AI WAKAMATSU,TOMOYASU SUGIYAWA,KEIICHI
SHINICHI KOJIMA,
PI TETSUJI OTSUKI,HISASHI KOGA
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Primer for synthesizing
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TOSHIO OTA,TETSUO NISHIKAWA,TAKAO ISOGAI,KOJI HAYASHI,SHIZUKO
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/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                               /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
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Location/Qualifiers
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full-length cDNA and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (25-MAR-2002) Takao Isogai, Helix Research Institute, genomics Laboratory; 1532-3 Yana, Kisarazu, Chiba 292-0812, Japan (B-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986) NEDO human cDNA sequencing project supported by Ministry of Economy, Trade and Industry of Japan; cDNA full insert sequencing: Research Association for Biotechnology; cDNA library construction: Institute of Medical Science, University of Tokyo, Laboratory of Genome Structure, Human Genome Center; cDNA 5'- & 3'-end one pass sequencing and clone selection: Helix Research Institute (supported by Japan Key Technology Center etc.).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Isogai,T., Ota,T., Nishikawa,T., Hayashi,K., Otsuki,T., Sugiyama,T., Suzuki,Y., Nagai,K., Sugano,S., Ishii,S., Kawai-Hio,Y., Saito,K., Yamamoto,J., Wakamatsu,A., Nakamura,Y., Kojima,S., Nagahari,K., Masuho,Y., Ono,T., Okano,K., Yoshikawa,Y., Aotsuka,S., Sasaki,N., Hattori,A., Okumura,K., Iwayanagi,T. and
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                                                                                                                                                                                                                                                                                             /tissue_type="placenta"
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/note="cloning vector: ]
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                                                                                                                                                                                                                                                                                                                                                                  /clone="PLACE1003407"
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Savukoski, M., Klockars, T.,
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IDDVHWKENGTLVQVATISGNMFNQMAKWVKQDNETGIYYETWNVKASPEKGAETWFD
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db_xref="taxon:9606"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (10-Apr.1997) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA 3 (bases 1 to 106988)

Hawkins, T.L., Reeve, M.P., Christoffersen, A., Birren, B.W., Hawkins, T.L., Lander, E.S., McKernan, K., Munro, C., Richardson, P., Fasman, K.H., Lander, E.S., McKernan, K., Munro, C., Richardson, P., Garan, N., Chang, A., Cooke, P., Daly, M.J., Forrest, C., Fripp, W.J., Gage, D., Geralgery, K., Hagos, B., Jacotot, L., Lane, M., MacKenzie, J., Marquis, N., McDermott, J., Moloney, N., Morrow, J., Nachman, A., Naylor, J., O'Connor, T., Peterson, K., Rollins, G., Spencer, J., Naylor, J., Stone, C., Strickland, C., Sydney, K., Wilmer, F. and
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AC001226.1 GI:2133862
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http://ftp.genome.washington.edu/RM/RepeatMasker.html
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
Submitted (29-MAY-1997) Whitehead Institute/MIT Center for Genome Submitted (29-MAY-1997) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA on May 29, 1997 this sequence version replaced gi:1932720. The Staden databases, finishing information, and all chromatographic files used in the assembly of this clone are available from our anonymous ftp site.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
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Hawkins, T.L., Reeve, M.P., Chrasman, K.H. and Lander, E.S.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
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                                                                                                        complement (674. .694)
/rpt family="AT_rich"
complement (835. .981)
                                                                                                                                                                                  complement (202.
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/chromosome="13"
                                                                                                                                                                                                                                                                                                                              organism="Homo sapiens"
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                                                                                                                                                                                                                                                       'clone="76N15"
                                                    _family="AluJo"
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ement (57)
                                                                                                                                                                                                                                                                                                             type="genomic DNA"
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/rpt_family="AT_rich"
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/rpt family="AT_rich"
complement (12394. .12440)
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24565. .24707
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/rpt family="GC rich"
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complement(39967. .40261)
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complement(33629. .33732)
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HTG; HTGS_PHASE1; HTGS_CANCELLED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Web site: http://www.sanger.ac.uk
Contact: humquery@sanger.ac.uk
------ Project Information
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3501
16445
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22242
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3500: gap of
16444: contig
16544: gap of
19514: contig
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gap of
                       f 100 bp
g of 20568 bp:
f 100 bp
g of 12025 bp:
f 100 bp
g of 18277 bp:
f 100 bp
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100 bp
of 25693 bp in length
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequencing vector: plasmid; L08755; 100% of reads Sequencing vector: plasmid; L08755; 100% of reads Chemistry: Dye-terminator Big Dye; 100% of reads Consensus quality: 162085 bases at least Q40 Consensus quality: 164040 bases at least Q20 Consensus quality: 166040 bases at least Q20 Insert size: 168062; sum-of-contigs Quality coverage: 4.08x in Q20 bases; sum-of-contigs Quality coverage: 4.08x in Q20 bases; sum-of-contigs Quality coverage: 4.16x in Q20 bases; agarose-fp
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Homo sapiens chromosome 13 clone RP11-185124, 14 unordered pieces.
AL136440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       requests: clonerequest@sanger.ac.uk
On Sep 8, 2000 this sequence version replaced gi:6982057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (10-JUL-2001) Sanger Centre, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                 arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NOTE: This is a 'working draft' sequence. It currently consists of 14 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                          g of 2970 bp in length
f 100 bp
g of 2627 bp in length
if 100 bp
g of 3185 bp in length
                                                                                                                                                                                                                               100 bp
of 12944 bp in length
                                                                                                                                                                                                                                                                                                                               of 3400 bp in length
100 bp
of 7444 bp in length
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in length length

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/mol_type="genomic DNA"
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fragment_chain:2"
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Homo sapiens
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AL359875.3 G
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Sequencing vector: plasmid; L08752; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Consensus quality: 220597 bases at least Q40
Consensus quality: 234299 bases at least Q30
Consensus quality: 241103 bases at least Q20
Insert size: 245987; sum-of-contigs
Insert size: 194986; agarose-fp
Quality coverage: 2.52x in Q20 bases; sum-of-contigs Quality
coverage: 3.92x in Q20 bases; agarose-fp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Web site: http://www.sanger.ac.uk
Contact: humquery@sanger.ac.uk
Project Information
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (12-JUN-2001) Sanger Centre, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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of 7843
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/mol_type="genomic DNA"
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fragment_chain:4"
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OS Artificial Se
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           Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Phyllobacteriaceae; Mesorhizobium.

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Sullivan, J.T., Trzebiatowski, J.R., Cruickshank, R.W., Gouzy, J.,
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24-JUL-1997 US 60/053613
PAUL O SHEPPARD, DIBRA G GILBERTON
C12N15/09, A61K38/00, A61K48/00, C07K14/47, C07K16/18, C12N1/15,
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and Ronson, C.W.
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/dr_xref="GI:2080
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/gene="no10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:381"
complement(104. .2125)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gene name confidence : putative"
/gene="nol0"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism="Mesorhizobium loti"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="PROBABLE TRANSFERASE, NODULATION PROTEIN NOLO"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           strain="R7A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gene name confidence : putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement (2430. .3218)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement (2430. .3218)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      egeavladildtitldqaqrealtgelrrlweqrrvrmrpsqaarvdqn"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                codon start=1/
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       function="cell processes; nodulation"
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                                                                                                                                                                                                                                                                                                       /product="PROBABLE NODJ MEMBRANE TRANSPORT PROTEIN"
                                                                                                                                                                                                                                                                                                                                               /evidence=not_experimental
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          note="Product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  function="cell processes; nodulation" note="Product confidence : probable
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            confidence :
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                                                                                           gene
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/note="Product confidence : probable
Gene name confidence : putative"
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LLRPANLEDVFLRLTGREMEE"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product="PROBABLE NODULATION PROTEIN C,
N-ACETYIGLUCOSAMINYLTRANSFERASE"
/protein id="CAD31533.1"
/db_xref="GOA:Q8KJI5"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="GOA:P23703"
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/transl_table=11
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                                                          /gene="msil30"
6579. .6833
                                                                                                                                                                                                                                   /evidence=not_experimental
/trans| table=11
/product="probable NODA N-ACYLTRANSFERASE PROTEIN"
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/db_xref="GI:20803957"
                                                                                                                                                                                                                                                                                                                                                             Gene name confidence : putative"
                                                                                                                                                                                                                                                                                                                                                                                                                   complement (5624. .6220)
/gene="nodA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement (5624. .6220)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LSRSSAANVTDTGGTSSKPNLVGSDAAYSEQQ"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DLIRPVMLDHPISGIALHVGVLGLYALLPFFLSMALLRRRLMR"
                                                                                                6579. .6833
                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="nodA"
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                                                                                                                  LPSTTRVDDDVLLMVLPIGRSMSEWPAGTLIDRNGPEL"
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/note="Product confidence : probable
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/gene="msi130"
/function="miscellaneous; unknown"
/note="Product confidence : hypothe
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  hypothetical
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RESULT 13
HSBA19D2/c
LOCUS
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                                                                                                                                                                                 SOURCE.
ORGANISM
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
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                                                                                                                                                                                                                                                                                                                                 ACCESSION
AUTHORS
TITLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        130027 ATGCAAACAGGAGCCGGAAGGTGTCGCGGTAGGAGGCGATGGTGTTGGAGCTTACGCCTC 129968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MetArgArgGlyAlaGlyAlaAlaArgGlyArgAlaSerTrpCysTrpAlaLeuAlaLeu 20
                                                                                                                                                                                                                                                                                                                                                                Human DNA sequence from clone RP11-19D2 on a putative novel gene, ESTs, STSs and GSSs,
   Direct Submission
                                                                                                        Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo
                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                     a putative
AL080248
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                                      McMurray,A.
                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                              AL080248.7 GI:5725257
                                                                     (bases 1 to 166913)
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/note="Product confidence : probable
Gene name confidence : putative"
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/gene="nods"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /function="small molecule metabolism"
/note="Product confidence : putative
Gene name confidence : hypothetical"
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/evidence=not_experimental
/transl_table=11
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/protein_id="CAD31535.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /codon_start=1
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(protein id="CAD31537.1"
/db_xref="G1:20803960"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="msi132"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene="msi132"
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73.00
70.00%
60.00%
47.40%
                                                                                                                                                                                                                                                                                                                                                                                                                                                 166913 bp
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                                                                                                                                                                                                                                                                                                                                                                                                          pDNA linear PRI 10-MAK-2001
RP11-19D2 on chromosome 20. Contains
                                                                                                                                                                                                                                                                                                                                                                                   complete sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRI 10-MAR-2001
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/note tat subs: subs: /rep /rep 1146 /not 1287 /not get subs subs /rep	aca in this entry substitution" /replace="ata" 578580 /note="clone RP5-988G17 tat in this entry substitution" /replace="tgt" 703705 /note="clone RP5-988G17 gtc in this entry substitution" /replace="tgt" /substitution" /replace="gcc" 932934	corresponding to the overlapping clone, as we submission only a small overlap as described above. The following abbreviations are used to associate primary accession manbers given in the feature table with their source databases: numbers given in the feature table with their source databases: numbers given in the feature table with their source databases: numbers given in the feature table with their source databases: numbers given in the workPEP database can be found at the was generated from part of bacterial clone contigs of human chromosome 20 constructed by the Sanger centre Chromosome 20 Mapping Group. Further information can be found at regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality = 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest. Rell-1902 is from the library RPCI-11.1 constructed by the group of Pieter de Jong. For further details sequence is not the entire insert of clone RPI-1902 It may be shorter because we sequence overlapping sections only once, except for a 100 base overlap. **EATURES** BACTURES** **COORS** IDEA** **COORS** IDEA**	JOURNAL Submitted (02-MAR-2001) Sanger Centre, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk MMENT On Aug 10, 1999 this sequence version replaced gi:5596948. On Aug 10, 1999 this sequence torsion overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the
repeat_region 1 misc_feature comisc_feature variation 2	repeat_region 1	repeat_region /not /not /not /not /not /not /not /n	ion _region
er at 77% conserved" 9477) m:AQ005419" m:AQ246957"	repeat: matches 53315439 of 96 repeat: matches 53315439 of 99 repeat: matches 35084696 of crepeat: matches 19132360 c 100 repeat: matches 19132360 c 100 repeat: matches 58946087 c 100 grepeat: matches 58946087 c 100 grepeat: matches 57056163 c 100 51 repeat: matches 57055704 c 100 52 repeat: matches 55095704 c 100 53	TILLOUS BE EL	11334 te="clone RP5-988G17 te in this entry ertion" place="gc" 31791 31791 72298

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RESULT 14
AC079116/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
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                                                                                                                                                                                                                                                                         156588 TGCAGGGTA 156580
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                                                                                                                                          147856 bp DNA linear HTG 23-SEP-2000
Homo Bapiens chromosome UNK clone RP11-103D9, WORKING DRAFT
SEQUENCE, 9 unordered pieces.
AC079116
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 147856)
                                                           Homo sapiens
                                                                           Homo sapiens (human)
                                                                                           HTG; HTGS_PHASE1; HTGS_DRAFT
                                                                                                                  AC079116.2 GI:10280934
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24729. .25068

/note="MER7A repeat: matches 2..346 of consensus"
complement(join(25074..25207,78259..78297))
/note="match: STS: Em:252394"
join(25143..25339,82904..82972)
/note="match: STS: Em:G07821"
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23244. .23380
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21998. .22438
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20823. .21222
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25935. .25937
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/note="match: GSS: Em:AL023755"
complement(join(24573. .24708,82902. .82963))
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substitution"
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24007. .24009
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23350. .23352
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequencing vector: plasmid; 0% Chemistry: Dye-primer ET; 100% of reads Chemistry: Dye-terminator Big Dye; 0% of reads Assembly program: Phrap; version 0.990319 Consensus quality: 142405 bases at least Q40 Consensus quality: 144423 bases at least Q20 Consensus quality: 145315 bases at least Q20
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Waterston, R.H.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    On Sep 23, 2000 this sequence version replaced gi:9845173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Waterston, R.H.
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Web site:http://genome.wustl.edu/gsc/index.shtml
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Quality coverage: 5.59 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Insert size: 162000; agarose-fp
Insert size: 146912; sum-of-contigs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NOTE: This is a 'working draft' sequence. It currently consists of 9 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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1832
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                                                                                                          clone_end:SP6
                                                                                                                            /note="assembly_name:Contig46
                                                                                                                                                                 /note="assembly_name:Contig45"
                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                              db xref="taxon:9606"
chromosome="UNK"
                                                                                                                                                                                                                                                                                       organism="Homo sapiens"
              note="assembly_name:Contig47"
                                                  note="assembly_name:Contig14"
                                                                                                                                                                                                           clone="RP11-103D9"
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112502: gap of unknown length
147856: contig of 35354 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3231: gap of unknown remy...
10519: contig of 7288 bp in length
10619: gap of unknown length
27623: contig of 17004 bp in length
27623: gap of unknown length
                                                                                                                                                                                                                                                                    type="genomic
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1831: gap of unknown length
2887: contig of 1056 bp in length
2987: gap of unknown length
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of 26839 bp in length
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Homo sapiens BAC clone RP11-527A7 from 2, AC008177
AC008177.3 GI:10716656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; 1 (bases 1 to 152996) Sulston, J.E. and Waterston, R.
                                                                                                                                                Waterston,R.H.
Direct Submission
Submitted (15-JUL-2000) Genome Sequencing Center, Washington
University School of Medicine, 4444 Forest Park Parkway, St. Louis,
MO 63108, USA
5 (bases 1 to 152996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Toward a complete human genome sequence Genome Res. 8 (11), 1097-1108 (1998)
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Waterston, R.H.
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Direct Submission
Submitted (25-MAR-2001) Genome Sequencing Center, Washington
University School of Medicine, 4444 Forest Park Parkway, St.
                                                                           Submitted (07-OCT-2000)
University, 4444 Forest
                                                                                                                                                                                                                                                                                    Submitted (28-JUL-1999) Genome Sequencing Center, Washington University School of Medicine, 4444 Forest Park Parkway, St. Louis,
                                                                                                                                                                                                                                                                                                                                                                       The sequence of Homo sapiens 
Unpublished (2001)
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                                               Waterston, R.H.
                                                                                                                  Direct Submission
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                                                                                                                                                                                                                                                     63108, USA (bases 1 to 152996)
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112503. .147856
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sapiens BAC clone RP11-527A7
                                                                                 Department of Genetics, Washington Park Avenue, St. Louis, Missouri 6
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                                                                                      63108, USA
     Louis,
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REFERENCE
AUTHORS
TITLE
                                                                                                                                          COMMENT
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                                                                                                                   Submitted (29-OCT-2002) Department of Genetics, Washington University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, on Oct 7, 2000 this sequence version replaced gi:9211468.
                                                                                                                                                                                                                    7 (bases 1 to Waterston, R.
                                                                                                                                                                                                       Direct Submission
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7 (bases
Center project name: H_NH0527A07
                  Contact: sapiens@watson.wustl.edu
                                                                             Center: Washington University Genome Sequencing Center Center code: WUGSC
                                                          Web site: http://genome.wustl.edu/gsc
                                                                                                                                                                                                                                                                  USA
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NOTICE: This sequence may not represent the entire insert of this clone. It may be shorter because we only sequence overlapping clone sections once, or longer because we provide a small overlap between neighboring data submissions.

This sequence was finished as follows unless otherwise noted: all regions were double stranded, sequenced with an alternate chemistry, or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by sequence from more than one subclone; and the assembly was confirmed by restriction digest.

MAPPING IMPORMATION:
Mapping information for this clone was provided by Dr. John D.
Mapping information for Genetics, Washington University, St. Louis
McPherson, Department of Genetics, Washington University, St. Louis
McPherson, Importantion about the map position of this sequence, see http://genome.wustl.edu/gsc

donor, as described by Osoegawa, K., Woon, P.Y., Zhao, B., Frengen, E., Tateno, M., Catanese, J.J. and de Jong, P.J. (1998) An improved approach for construction of bacterial artificial chromosome libraries. Genomics 51:1-8. The clone may be obtained either from Research Genetics, Inc. (http://www.resgen.com) or Pieter de Jong and coworkers at http://www.chori.org The RPCI-11 human BAC library was made from the blood of SOURCE INFORMATION: pBACe3.6 one male

NEIGHBORING SEQUENCE INFORMATION:

The clone sequenced to the right is RP11-18C9, 200 base pair overlap. Actual start of this clone is at base position 1 of RP11-527A7, actual end is at base position 42119 of RP11-18C9

FEATURES repeat_region repeat_region repeat_region repeat_region source repeat_region repeat_region repeat_region /rpt_family="L2" 7932. .8185 /clone="RP11-527A7" /clone_lib="RPCI-11" 524. . 2073 location/Qualifiers mol_type="genomic DNA" db_xref="taxon:9606" rpt_family="L1" rpt_family="MER2_type" chromosome="2" organism="Homo sapiens" rpt_family="MER2_type" .152996 _family="L1" family="MIR" family="L1" .2830 .6107

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Search completed: April 25, 2004, 03:24:31 Job time : 620.278 secs
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41: em_htgo_mus:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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1 (bases 1 to 697)
Ota, T., Nishikawa, T., Isogai, T., Hayashi, K., Ishii, S., Kawai, Y., Wakamatsu, A., Sugiyama, T., Nagai, K., Kojima, S., Otsuki, T. and
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JP 2002017375-A/618.
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patent: JP 2002017375-A 618 22-JAN-2002;
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Primer for synthesizing full-length cDNA and use thereof FH I
Location/Qualifiers
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BD126453
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 697) (bases 1, to 697) (
                                                                                                                                                                                                                   Homo sapiens (human)
                                                                                                                                                                                                                                                                                                     BD126453.1 GI:23221398 JP 2002017375-A/1884.
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JP 2002017375-A/618
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TOSHIO OTA,TETSUO NISHIKAWA,TAKAO ISOGAI,KOJI HAYASHI,SHIZUKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YURI KAWAI,AI WAKAMATSU,TOMOYASU
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/mol_type="genomic DNA"
/db_xref="taxon:9606"
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            Hayashi,K., Ishii,S., Kawai,K., Kojima,S., Otsuki,T. and
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Primer for synthesizing full-length cDNA and use thereof Patent: JP 2002017375-A 1884 22-JAN-2002;

HELIX RESEARCH INSTITUTE
OS Homo sapiens (human)
PN JP 2002017375-A/1884
PD 22-JAN-2002
PF 07-UUL-2000 JP 2000253172
PF 07-UUL-2000 JP 2000253172
PF 1 TOSHIO OTA, TETSUO NISHIKAWA, TAKAO ISOGAI, KOJI HAYASHI, SHIZUK PI ISHII, KAWAI,AI WAKAMATSU, TOMOYASU SUGIYAMA, KEIICHI NAGAI, PI SHINICHI KOJIWA,
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Primer for synthesizing full-length cDNA and use thereof FH K
Location/Qualifiers
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BD073402
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JP 2001511345-A/1
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Sheppard, P.O. and Gilberton, D.G.
Sheppard, P.O. and Hilberton, D.G.
Serpeated protein which human chromosome
Patent: JP 2001511345-A 1 14-AUG-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
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C12N1/21, C12N5/10, C12P21/02, C12Q1/68, C12N15/00, A61K37/02, C12N5/
                                                                                                                                                                                                                                                                                                                             ZYMOGENETICS INC
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TOSHIO OTA,TETSUO NISHIKAWA,TAKAO ISOGAI,KOJI HAYASHI,SHIZUKO
                                                                                                                                                                                                                        Homo sapiens (human)
JP 2001511345-A/1
14-AUG-2001
                                                                                              24-UUL-1998 JP 2000504249
24-UUL-1997 US 60/053613
PAUL O SHEPPARD, DIBRA G GILBERTON
C12N15/09, A61K38/00, A61K48/00, C07K14/47, C07K16/18, C12N1/15,
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/mol_type="genomic DNA"
/db_xref="taxon:9606"
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OS Homo sapiens (humar PN 1977)

OS Homo sapiens (humar PN 1978)

PM JP 2002506627-A/25

PD 05-MAR-1999 US (60/078

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95 human secretory proteins.
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BD136338.1 GI:23231283
JP 2002506627-A/25.
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Ruber, S.M., Ni, J., Rosen, C.A., Yu, G.L., Young, P.E., Fen, P. Soppet, D.R., Wei, Y.F., Endress, G.A., Duan, R.D., Kyaw, H., E Lafleur, D.W., Olsen, H.S., Shi, Y. and Moore, P.A.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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JP 2002506627-A/25
05-MAR-2002
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n equals a,t,g, or c
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                                                                                                                                                                                                                                                                                                                                                     REINHARD EBNER, DAVID W LAFLEUR, HENRIK S OLSEN, YANGGU SHI, PAUL
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19-MAR-1998 US 60/078566,19-MAR-1998 US 61,19-MAR-1998 US 62,19-MAR-1998 US 63,19-MAR-1998 US 64,19-MAR-1998 US 64,19-MAR-1998 US 66,19-MAR-1998 US 67,19-MAR-1998 US 
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/mol_type="genomic DNA"
/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                                                         PC C12P21/02,C14W1/09/C12P21/02 For synthesizing full-length Location/Qualifiers (16)..(1089).
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PN 17 2002017375-A/3289

PN 2002017375-A/3289

PD 22-JMA-2002

PF 07-JUL-2000 JP 2000253172

PI TOSHIO OTA, TETSUO NISHIKAWA, TAKAO ISOGAI, KOJI HAYASHI, SH:

PI ISHII,

PI YURI KAWAI, AI WAKAMATSU, TOMOYASU SUGIYAMA, KEIICHI NAGAI,

SHINICHI KOJIMA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 2120)

Ota, T., Nishikawa, T., Isogai, T., Hayashi, K., Ishii, S., Kawai, Y., Wakamatsu, A., Sugiyama, T., Nagai, K., Kojima, S., Otsuki, T. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Primer for synthesizing full-length cDNA and use thereof Patent: JP 2002017375-A 3289 22-JAN-2002;
HELIX RESEARCH INSTITUTE
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ner for synthesizing full-length cDNA and use thereof FH I
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TOSHIO OTA,TETSUO NISHIKAWA,TAKAO ISOGAI,KOJI HAYASHI,SHIZUKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TETSUJI OTSUKI, HISASHI KOGA
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/mol_type="genomic DNA"
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/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (25-MAR-2002) Takao Isogai, Helix Research Institute, Genomics Laboratory; 1532-3 Yana, Kisarazu, Chiba 292-0812, Japan (B-mail:genomics@hri.co.jb, Tel:81-438-52-3975, Fax:81-438-52-3986) NEDO human cDNA sequencing project supported by Ministry of Economy, Trade and Industry of Japan; cDNA full insert sequencing: Research Association for Biotechnology; cDNA library construction: Institute of Medical Science, University of Tokyo, Laboratory of Genome Structure, Human Genome Center; cDNA 5'- & 3'-end one pass sequencing and clone selection: Helix Research Institute (supported by Japan Key Technology Center etc.).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Isogai,T., Ota,T., Nishikawa,T., Hayashi,K., Otsuki,T., Suzuki,Y., Nagai,K., Sugai,A., Ishii,S., Kawai-Hio,Y., Saito,K., Namamoto,J., Wakamatsu,A., Nakamura,Y., Kojima,S., Nagahari,K., Masuho,Y., Ono,T., Okamo,K., Yoshikawa,Y., Aotsuka,S., Sasaki,N., Hattori,A., Okumura,K., Iwayanagi,T. and
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Homo sapiens cDNA FLJ90628 fis, clone PLACE1003407, highly similar
to Homo sapiens putative transmembrane protein (CLN5) mRNA.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Isogai, T. and Otsuki, T.
Direct Submission
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MetArgArgGlyAlaGlyAlaAlaArgGlyArgAlaSerTrpCysTrpAlaLeuAlaLeu 20
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/mol_type="mRNA"
/db_xref="taxon:9606"
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                                               US-10-010-050A-2_COPY_1_30 (1-30)
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Savukoski, M., Klocka
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
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1293. .2516
/gene="CLN5"
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/mol_type="mRNA"
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/product="putative transmembrane protein"
/protein_id="AAC27614.1"
/db_xref="GI:3342386"
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Genomic sequence from Human 13,
AC001226
AC001226.1 GI:2133862
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3 (bases 1 to 106988)

4 Hawkins,T.L., Reeve,M.P., Christoffersen,A., Birren,B.W.,
Fasman,K.H., Lander,E.S., McKernan,K., Munro,C., Richardson,P.,
Barna,N., Chang,A., Cooke,P., Daly,M.J., Forrest,C., Fripp,W.J.,
Barna,N., Ghang,A., Cooke,P., Jacotot,L., Lane,M., MacKenzie,J.,
Magge,D., Geraigery,K., Hagos,B., Jacotot,L., Lane,M., MacKenzie,J.,
Marquis,N., McDermott,J., Molney,N., Morrow,J., Nachman,A.,
Maylor,J., O'Connor,T., Peterson,K., Rollins,G., Spencer,J.,
Naylor,J., O'Connor,T., Peterson,K., Rollins,G., Spencer,J.,
Naylor,J., Stone,C., Strickland,C., Sydney,K., Wilmer,F. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hawkins, T.L., Reeve, M.P., Christoffersen, A., Birren, B.W., Fasman, K.H., Lander, E.S., McKernan, K., Munro, C., Richardson, P., Barna, N., Brown, K., Cooke, P., Daly, M.J., Forrest, C., Fripp, W.J., Gage, D., Geraigery, K., Hagos, B., Jacotot, L., Lane, M., MacKenzie, J., Marquis, N., McDermott, J., Moloney, N., Morrow, J., Nachman, A., Naylor, J., O'Connor, T., Peterson, K., Rollins, G., Spencer, J., Naylor, J., Stone, C., Strickland, C., Sydney, K., Wilmer, F. and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (29-MAY 1997) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On May 29, 1997 this sequence version replaced gi:1932720. The Staden databases, finishing information, and all chromatographic files used in the assembly of this clone are
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     available from our anonymous ftp site
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/mol_type="genomic DNA"
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plement(202. .611)
family=""""
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4361. .4640
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complement(23546. .23578)
/rpt_family="^^
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/rpt_family="(TA)n"
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/rpt_family="AT_rich"
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13782.
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/rpt_family="FAM"
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/rpt_family="(CAT)n"
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family="AT rich"
Tement (12394. .12440)
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5. .24707
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1. .15373
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Best Local Similarity:

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complement(47612...47684)
/rpt family="(CATA)n"
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42042. 42350
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Tement(50160. .50)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Assembly program: XGAP4; version 4.5
Sequencing vector: plasmid; L08752; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Consensus quality: 162085 bases at least Q40
Consensus quality: 164521 bases at least Q30
Consensus quality: 166040 bases at least Q20
Consensus quality: 166040 bases at least Q20
Consensus quality: 166040 bases; agarose-fp
Ouality coverage: 4.08x in Q20 bases; sum-of-contigs
Quality coverage: 4.16x in Q20 bases; sum-of-contigs Quality
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      requests: clonerequest@sanger.ac.uk
On Sep 8, 2000 this sequence version replaced gi:6982057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens chromosome 13 clone RP11-185I24, 14 unordered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Web site: http://www.sanger.ac.uk
Contact: humquery@sanger.ac.uk
------ Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (10-JUL-2001) Sanger Centre, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Center project name: bA185I24
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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HTG; HTGS_PHASE1; HTGS_CANCELLED
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NOTE: This is a 'working draft' sequence. It currently consists of 14 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence.
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/mol_type="genomic DNA"
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On Aug 22, 2000 this sequence version replaced gi:8894433.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             * NOTE: This is a 'working draft' sequence. It currently consists of 53 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Yuen, K.Y.,
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24-JUL-1997 US 60/053613
24-JUL-0 SHEPPARD, DIBRA G GILBERTON
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/mol_type="genomic DNA"
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During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one Mi3 subclone; and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
Submitted (04-MAR-2003) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries:
humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk
on Oct 2, 1997 this sequence version replaced gi:2315177.
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Danchin, A. and Pascal, G.
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Contact: humquery@sanger.ac.uk
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/db_xref="taxon:37727"
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complement(10481. .10623)
note="MEREB; RepeatMasker predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="SINE/Alu" 3658. .39964
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="FRAM; RepeatMasker predicted
23/10/2000"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="AluSx; RepeatMasker
                                                /product="small optic lobes
/protein_id="AAK61233.1"
/db_xref="GI:14336701"
                                                                                                                                                    join(19075. .20523,21229. .21437,21524. .21707,21851. .2
23538. .23663,23748. .23900,24287. .24448,24537. .24766,
24841. .25007,25099. .25277,25575. .25752)
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                                                                                                        /codon_start=
                                                                                                                        /note="PubMed:9722942"
                                                                                                                                       gene="SOLH"
                                                                                                                                                                                                                                               note="AluJb; RepeatMasker predicted"
                                                                                                                                                                                                                                                                                                                    note="(CCTCG)n; RepeatMasker predicted
translation="MATVGEWSCVRCTFLNPAGQRQCSICEAPRHKPDLNHILRLSVE"
                               db_xref="MIM:603267"
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e="AluJb; RepeatMasker predicted
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Tement(11229. .11378)
              xref="SPTREMBL:075808"
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                                                                                                                                                                                                                                                                                   _family="Simple_repeat"
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KEYWORDS
SOURCE
ORGANISM
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AL137007
LOCUS
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VERSION
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Query Match:
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JOURNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 GlyAlaGlyAlaAlaArg---GlyArgAlaSerTrpCysTrpAlaLeuAlaLeuLeuTrp
requests: clonerequest@sanger.ac.uk

on Jun 26, 2000 this sequence version replaced gi:8573795.

During sequence assembly data is compared from overlapping clones.

Where differences are found these are annotated as variations the together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.

This sequence has been finished according to sequence map criteria as follows. An attempt is made to resolve all sequencing problems, such as compressions and repeats, but not necessarily within known annotated human repeat sequence elements (e.g. Alu). Where the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human DNA sequence from clone RPI-303F19 on chromosome 6q12 Contains fragments of a gene similar to the Notch (Drosophi: homolog, STSs and GSSs, complete sequence.

AL137007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (01-AUG-2000) Sanger Centre, Hinxton, Cambridgeshire CB10 1SA, UK. B-mail enquiries: humquery@sanger.ac.uk Clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Williams,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
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LRRRESMHVEQRRQTDEGEAKALWENI VAFCRENNYSFUDSTPPEREVGFPACDSV
QQRVRQWLRPQEINCSVFRDHALWENI VAFCRENNYSFUDSTPPEREVGFPACDSV
QQRVRQWLRPQEINCSVFRDHALWENI VAFCRENNYSFUDSTPPERSVGFPACDSV
QQRVRQWLRPQEINCSVFRDHALWENI VAFCRENNYSFUDSTPPERSVGFPACDSV
QQRVRQWLRPQEINCSVFRDHALWENI VAFCRENNYSFUDSTPPUTDLIWAKM
LEKALJAKLHGSYFALQAGRAI EGLATITGAPCESLALQLSSTNPREBPVDTDLIWAKM
LEKALJAKLHGSYFALQAGRAI EGLATITGAPCESLALQLSSTNPREBPVDTDLIWAKM
LEKALJAKLHGSYFALQAGRAI EGLATITGAPCESLALQLSSTNPREBPVDTDLIWAKM
LEKALJAKLHGSYFALQAGRAI EGLATITGAPCESLALQLSSTNPREBPVDTDLIWAKM
LEKALJAKLHGSYFALQAGRAI EGLATITGAPCESLALQLSSTNPREBPVDTDLIWAKM
LEKALJAKLHGSYFALQAGRAI EGLATITGAPCESLALQLSSTNPROVDLITARAM
LEKALJAKLHGSYFALQAGRAI EGLATITGAPCESTRAPVORGEREEGRE
ESNRGSWSDEWPHRPGHLKCELMPHGSSEGVFWMEPVDFVRYFDSVDLCKHSDWQE
RESNRGSWSDEWPHRPGHLKECELMPHGSSEGVFWFTDLADAITLITESRGERHEGREG
SPSACVPRASPEPGHVLAVKSRLVMVEPVBAQPTTLADAITLITESRGERHEGREG
SPSACVPRASPEPGHVLAVKSRLVMVEPVBAQPTTLADAITLITESRGERHEGREG
SPSACVPRASPEPGHVAVKFVSCDVWLBFPLAFQV
LIVILGQLEGRAGGITHRLAHRKAAQAPLSDWTASKGTHSPPLTPDVAGLHGPRPDL"
104A3
104C9
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/note="(GGA)n; I
23/10/2000"
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EEAGPVRTAGLVATEPARGQCEDKDEBEKEEQEEEEGAAEPRGGMACPRCTLHNTPVA
SCGSVCGGPRALISLPRLPPEALVVPEVVAPAGFHVVBAAPPPGLPGAGEANPPATSQ
GPAAEPEPBRVPPFBPSSTLQNNWPGRSREREVPPQLQPPVPEAAQPSSPSAGCRGAPQ
GSGWAGASRLAELLSGKRLSVLEEEATEGGTSRVEAGSSTSGSDIIDLAGDTVRYTPA
SPSSPDFTTWSCAKCTLRNPTVAPRCSACGCSKLHGFQEHGEBPTHCPDCGADKDSPC
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/note="C-rich;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             http://www.sanger.ac.uk/Projects/C_elegans/wormpep This sequence was generated from part of bacterial clone contigs of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RP1-303F19 is from the library RPCI-1 constructed at the Roswell Park Cancer Institute by the group of Pieter de Jong. For further details see http://bacpac.med.buffalo.edu/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Group.
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Group. Further information can be found at
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     //www.sanger.ac.uk/HGP/Chr6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8916. .9626
/note="THE1A-internal repeat: matches
                                                                                                                                                                                                   /note="MLT2CA repeat: matches 5.complement(12882. .13318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         consensus'
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!485. .3623
                                                                                                                                                                complement (12883.
                                                                                                                                                                                                                                                                                    note="AluJb repeat: matches 7. .301 of 1321. .11388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note="THE1B repeat: matches 1. .88 of consensus"
3222. .8930
note="THE1A-internal repeat: matches 25. .737 of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="21 copies 2 mer ac 90% conserved"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note="L1 repeat: matches 4365. .4378 of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note="L1PB3 repeat:
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                                                                                                                                                                                                                                                                                                                                                                                                                                    note="THEIA repeat: matches 1.
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                                                                                                                        2884. .13584
                                                                                                                                                                                                                                              2656. .13022
                                                                                                                                                                                                                                                                                                                                                                                             note="match: GSS: Em:AQ321138"
                                                                                                      note="match:
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                                                                                                                                                                                      e="match: GSS: Em:AQ817672"
                                                                                                                                                                                                                                                                   e="34 copies 2 mer tc 67% conserved"
                                                                                                                                                                                                                                                                                                                                                     e="match: GSS: Em:AQ113885"
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                                                                                                      GSS:
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                       repeat: matches 459.
                                                                                                         Em: B83082"
                                                                                                                                               Em: AQ450753"
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/note="MLT1-INTERNAL
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22102. .22393
/note="AluJb repeat: matches 1. .293 of consensus"
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28570. .29375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement (24809.
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/note="LIMC2 repeat: matches 4769.
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'note="MLT2B repeat: matches 1. .400 of consensus"
8369. .18765
                                                                                                                                                                                                                                                                                                 /note="Single clone region. Assembly confirmed by restriction digest"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="Il repeat: matches 4518. .4604 of 25806. .25984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="33 copies 2 mer ta 74% conserved"
25120. .25259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note="MLT1C repeat: matches 65.
                                                                                                                                                                                                                                                                                                                                        30540. .30562
                                                                                                                                                                                                                                                                                                                                                   /note="AluSc repeat: matches 1.
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                                                                                                 36069. .36886
/note="L1M4c repeat: matches 828. .1627 of consensus"
                                                                                                                                                  /note="L2 repeat: matches 1837. .2666 of consensus"
35947. .36061
                                                                                                                                                                                                                     33714. .34154
                                                                                                                                                                                                                                                                                                                                                                                 note="LIMEc repeat: matches 944. .1803 of consensus"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       'note="MER52A repeat: matches 191.
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/note="L1MA7 repeat: matches 5918, .6288 of consensus"
                                                                                                                                                                                                note="match: GSS: Em:AQ114098"
                                                                                                                                                                                                                                   'note="L2 repeat: matches 1837.
                                                                                                                                                                                                                                                                 note="AluSq repeat: matches 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="LIMEc repeat: matches 2278.
                              note="THEIB repeat: matches 1.
                                                                 'note="L2 repeat: matches 2631.
                                                                                                                                note="L1M4 repeat:
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                                                                                27 ---ProGlyTrp 29
                                                                                                                                8 AlaArgGlyArgAlaSerTrpCysTrpAlaLeuAlaLeuLeuTrpLeuAlaValVal--- 26
                                                                                                                                                                                                                                                                                                                                                                                                      /note="128 copies 2 mer at 80% conserved"
46593. .46654
47286. .47467
/note="L2 repeat: matches 2555. .2737 of consensus"
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Copyright
GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
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27513289 seqs, 14931090276 residues

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Ommand line parameters:

WODEL=frame+_p2n.model -DEV=xlh
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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ALIGNMENTS

REFERENCE	ORGANISM	SOURCE	VERSION	ACCESSION		NOITI	LOCUS	AL546472	RESULT 1
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1201)	Homo sapiens	Homo sapiens (human)	AL546472.2 GI:31268306	AL546472	clone CSODIO30YJ01 5-PRIME, mRNA sequence.	AL546472 Homo sapiens PLACENTA COT 25-NORMALIZED Homo sapiens COMP	AL546472 1201 bp mRNA linear BSI 31 PRIST STORY		

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BP 191 91006 EVRY cedex - France
Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238.f For
more information about this cluster, see
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On Feb 15, 2001 this sequence version replaced
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Feng Liang Email : fliang@lifetech.com URL :
http://fulllength.invitrogen.com/ Invitrogen Corporation 1600
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{\tt AsnGluThrGlyIleTyrTyrGluThrTrpAsnValLysAlaSerProGluLysGlyAla}
                                                                                                                                                                           /tissue type="PLACENTA COT 25-NORMALIZED"
/clone_lib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/note="1st strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR v
sites of the pCMVSPORT 6 vector. Library was normalized.
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/db_xref="taxon:9606"
/clone="CS0DI030YJ01"
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/mol_type="mRNA"
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Mus musculus 7 days neonate cerebellum cDNA, RIKEN full-length enriched library, clone:A730075N08 product:similar to CEROID-LIPOFUSCINOSIS NEURONAL PROTEIN 5 (CLN5 PROTEIN) [Homo sapiens], full insert sequence.
                                                                                                                                                                                                                                                             Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y., Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new (Genome Res. 10 (10), 1617-1630 (2000)
                             Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Karaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y., RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                           Carninci,P. and Hayashizaki,Y.
High-efficiency full-length cDNA
Meth. Enzymol. 303, 19-44 (1999)
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PUBMED REFERENCE

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Group Phase I & II Team.
Analysis of the mouse transcriptome of 60,770 full-length cDNAs
Nature 420, 563-573 (2002)
6 (bases 1 to 2356)
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Please visit our web site for further
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Rike Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
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TyrCysGlnAlaLysTyrThrPheCysProThrGlySerProIleProValMetGluGly
                                                                                  SerArgArgHisTrpProValProTyrLysArgPheAspPheArgProLysProAspPro
                                                            /note="similar to CEROID-LIPOFUSCINOSIS NEURONAL (CLN5 PROTEIN) [Homo sapiens] (SWISSPROT|075503, FASTY, 73.9%ID, 86.7%length, match=1041)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /strain="C57BL/6J"
/db_xref="FANTOM_DB:A730075N08"
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                                                                                                                                                                          AK032293 2247 bp mRNA linear H7 Mus musculus adult male olfactory brain cDNA, RIKEN for enriched library, clone:6430516P20 product:similar to CEROID-LIPOPUSCINOSIS NEURONAL PROTEIN 5 (CLN5 PROTEIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, F., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiraoka, T., Hiraoka, T., Hiraoka, T., Hiraoka, T., Hiraoka, T., Hiraoka, T., Korin, K., Ishi, Y., Itoh, M., Kagawa, I., Kasukawa, T., Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Okazaki, Y., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagama, M., Tagawa, A., Takahashi, F., Takaku, A., Takahashi, F., Takaku, Y., Tanaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y. Direct Submission
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Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
Nature 420, 563-573 (2002)
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High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
                                                                                                                                                                                                                                                                                   cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN.
                                                                                                                                                                                                                                                                                                                                                          Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-Coci, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, URL:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
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                                          organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
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'db_xref="FANTOM_DB:6430516P20"
'db_xref="MGI:2395762"
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EWYKQDNETGIYYETWTVRAGPGQGAQTWFESYDCSWFYKLTAFYKKLAEFGTERKXIET
EWYKQDNETGIYYETWTVRAGPGQGAQTWFESYDCSWFYKLTAFYKKLAEFGTERKXIET
NYTKIFLYSGEBIYLGWSTSIGGBFKXWFLLALAIKKFYGFFRYYLSTKDFLMNFLKIF
DTVIIHRQFYLFYNFEXWFLEMKPPFVKITYEETPLFTRHTTFTDL"
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                                                                                                                                                                                                                                                                                                                                                                                                Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
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Mammalia; Eutheria; Rodentia;
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Encyclopedia Project of Genome Exploration Research Group in Riken
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Please visit our web site for further details.
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URL:http://fantom.gsc.riken.go.jp/.
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(clone_lib="KIKEN full-length enriched mouse cDNA library"
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86.7%length, match=1041)"
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BU621797
BU621797.1 GI:23288012
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: James Martin
cDNA Library preparation: Dr. M. Bento Soares, University of Iowa
cDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 689)

NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.

National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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                                                                                                                                                                                          Homo sapiens
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                                                                                                                                                     GlnAspAsnGluThrGlyIleTyrTyrGluThrTrpAsnValLysAlaSerProGluLys 178
                                                                                                                                                                                                                      LeuValGlnValAlaThrIleSerGlyAsnMetPheAsnGlnMetAlaLysTrpValLys 158
                                                                                                                                                                                                                                                              LeuGlyAsnCysThrPheProHisLeuArgProGluMetAspAlaProPheTrpCysAsn 118
                                                                                         GlyAlaGluThrTrpPheAspSerTyrAspCysSerLysPheValLeuArgThrPheAsn 198
                                                                                                                                                                                                TTAGTTCAAGTAGCAACTATATCAGGAAACATGTTCAACCAAATGGCAAAGTGGGTGAAA
                                                                                                                                   <u>AAGTTGGCTGAATTTGGAGCAGAGTTCAAGAACATAGAAACCAACTATACAAGAATATTT</u>
                                 LysLeuAlaGluPheGlyAlaGluPheLysAsnIleGluThrAsnTyrThrArqIlePhe 218
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2.71e-127 1237.00 100.00% 98.67% 70.36%

Length: Matches: Conservative: Mismatches: Indels:

000328

509

449

269

329

569

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DNA Sequencing by: Dr. M. Bento Soares, University of Iowa Clone Distribution: Clone distribution information can be from Dr. M. Bento Soares, bento-soares@ulowa.edu Seq primer: M13 FORWARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POLYA=Yes.
                                                           (harmacia) with a modified polylinker; Site 1: EcoR I; Site 2: Not I; NCI CGAP_FL1 is a normalized CDNA library derived from a pool of mRNA obtained from 4 cell lines from grade III chondrosarcoma tissues. The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded cDNA was ligated to an EcoR I adaptor, digested with Not I, and cloned directionally into pT73-Pac vector. The oligonucleotide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT)18 tail. The sequence tag for this library is GAGGTCGGTG. The cell lines were provided by Dr. James Martin from the University of Iowa.
TAG TISSUE=Human Chondrosarcoma Grade 3 cell line mix TAG_LIB=UI-H-FL1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="NCI_CGAP_FL1"
/note="Organ: Chondrosarcoma; Vector: pT7T3-Pac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="Cell lines"
/dev_stage="Adult"
/lab_host="DH10B (Life_Technologies)"
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'db_xref="taxon:9606"
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National Institutes of Health, Mammalian
Unpublished (1999)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Plate: LLAM14279 row: j column:
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Kristi A. Egland,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
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Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/mol type="mRNA"
/db_xref="teaxon:9606"
/clone="IMAGE:6720309"
/cell_line="ZR-75-1, MCF7, S
                                                                                                                                                                               /lab host="RMDH10B"
/clone lib="MAPCL"
/clone lib="MAPCL"
/clone lib="MAPCL"
/note="Vector: pCMV-SPORT6; Site_1: EcoRV; Site_2: Not I;
/note="Vector: pCMV-SPORT6; Site_1: EcoRV; Site_2: Not I;
Subtracted with brain, liver, lung, kidney and muscle.
Subtracted with liver, lung, kidney and
                                                                                                                                             cancer genes encoding membrane and secreted proteins. Manuscript submitted."
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  7.48e-126
1225.50
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BX331615 Homo sapiens NEUROBLASTOMA COT 10-NORMALIZED Homo
CDNA Clone CSODB009YC01 5-PRIME, mRNA sequence.
BX331615
Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
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Clone CSODIO30YJ01 3-PRIME, mRNA sequence.
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On Feb 16, 2001 this sequence version replaced
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/note="Ist strand cDNA was primed with a NotI-oligo(dT)
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sites of the pCMVSPORT 6 vector. Library was normalized.
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                 CDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information car
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLNM9579 row: b column: 08
High quality sequence stop: 662.
Location/Qualifiers
                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; F
Mammalia; Butheria; Primates; Catarrhini; Hominidae;
1 (bases 1 to 931)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collect
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                   931
601450425F1 NIH_MGC_65 Homo s
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/organism="Homo
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      718 -TATTGGGTTTTACCTATGAAATTC
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Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.8 kb. Library constructed by Life
Technologies. "
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ORIGIN	Average insert size 1.8 kb. Library constructed by Life Technologies. "
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05 07 08-10-010-01	50A-2_COPY_31_346 (1-316) x BEB73363 (1-931) 47 AspAspAspIleGluValPheArgLeuGlnAlaProValTrpGluPheLysTyrGlyAsp 66 47
D 07	67 LeuLeuGlyHisLeuLysIleMetHisAspAlaIleGlyPheArgSerThrLeuThrGly 86
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<u> </u>	CICCGACCIGAAAAIGCCCCTIICIGGIGIAAAAAAAAAA
Qу 1 Db 2	127 GlyIleAspAspValHisTrpLysGluAsnGlyThrLeuValGinValAiaThrlieSer 146
Ογ 1	147 GlyAsnMetPheAsnGlnMetAlaLysTrpValLysGlnAspAsnGluThrGlyIleTyr 166
Db 3	02
Qy 1	167 TyrGluThrTrpAsnValLysAlaSerProGluLysGlyAlaGluThrTrpPheAspSer 186
Db 3	62
0γ 1	87 TyrAspCysSerLysPheValLeuArgThrPheAsnLysLeuAlaGluPheGlyAlaGlu 2
Db 4	422 TACGACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAGTTGGCTGAATTTGGAGCAGAG 481
Qy 2	207 PheLysAsnIleGluThrAsnTyrThrArgIlePheLeuTyrSerGlyGluProThrTyr 226
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Qy 2	47 LysArgPheTyrTyrProPheLysProHisLeu-ProThrLysGluPheLeuLeuSerLe 2
Dp 6	02
Оу 2	66 uLeuGlnIlePheAspAlaValIleValHisLysGlnPheTyrLeuPheTyrAsnPheGl 2
Db 6	59
Qy 2	86 uTyrTrpPheLeuProMetLy8Phe
nh 7	20

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National Institutes of Health, Mammalian Gene Collection (MGC)
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Tissue Procurement: ATCC
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Plate: LLAM11023 row:
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                                                                                       GluPheLysTyrGlyAspLeuLeuGlyHisLeuLysIleMetHisAspAlaIleGlyPhe
                                                                                                                                   ATCCCAGTTATGGAGGGTGATGATGACATTGAAGTTTTTTCGATTACAAGCCCCAGTATGG
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                                                                                                                                                                                                         CGTCCAAAACCTGATCCTTATTGTCAAGCTAAGTATACTTTCTGTCCAACTGGCTCACCT
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                       ArgSerThrLeuThrGlyLysAsnTyrThrMetGluTrpTyrGluLeuPheGlnLeuGly 100
                                                                 GAATTTAAATATGGAGACCTCCTGGGACACTTGAAAATTATGCATGATGCCATTGGATTC
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1 (bases 1 to 908)

1i,W.B.; Gruber,C., Jessee,J. and Polayes,D.

Full-length cDNA libraries and normalization
Unpublished (2001)
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Homo sapiens
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/note="1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR \alpha
                                                                                                                                              /mol type="mRNA"
/db xref="eaxon:9606"
/clone="CSODL004YP03"
/cell type="B CELLS (RAMOS CELL LINE)
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                                                                                                  25-NORMALIZED"
                                                                                                                                                                                                                                                                                                       organism="Homo sapiens"
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                    Homo
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLN
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, M
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Tissue Procurement: DCTD/DTP
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Contact: Robert Strausberg, Ph.D.
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{\tt Gly AsnMetPhe AsnGln MetAlaLysTrpValLysGln AspAsnGluThrGlyIleTyr}
                                                                                 GlyIleAspAspValHisTrpLysGluAsnGlyThrLeuValGlnValAlaThrIleSer
                                                                                                                                                                            LeuArgProGluMetAspAlaProPheTrpCysAsnGlnGlyAlaAlaCysPhePheGlu
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                                                 GGAATAGATGATAAACACTGGAAGGAAAACGGGACACTGTCAGTCGTTGCAACCATATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="carcinoma, cell line"
/lab host="PHIOB (phage-resistant)"
/clone_lib="NIH_MGC_40"
/clone_lib="NIH_MGC_40"
/note="Torgan: prostate; Vector: pOTB7; Site_1: XhoI;
Site_2: EcoRI; cDNA made by oligo-dT priming-
pirectionally cloned into EcoRI/XhoI sites using the
following 5 adaptor: GGCACGAG(G). Library constructed by
fing Hong in the laboratory of Gerald M. Rubin (University
of California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."
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/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6382620"
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National Institutes of Health, Mammalian Gene Collection (MGC)
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                                                                                                                                                                                                                                                                                                                                                                                                                       Email: cgapbs-r@mail.nih.
                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1999)
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Location/Qualifiers
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/dev_stage="5 months"
/lab host="DHIOB"
/lab host="DHIOB"
/clone_lib="NCI_CGAP_Mam2"
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/note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: SalI;
Site_2: NotI; Cloned undirectionally. Primer: Oligo dT.
Library constructed by Life Technologies. Investigator
providing samples: Gilbert Smith, NIH"
                                                                                                                                                          /mol_type="mRNA"
/strain="FVB/N-3"
/db_xref="taxon:10090"
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Mammalia; Eutheria; Primates; Catarrhini;
1 (bases 1 to 787)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                       41
                                                                                                                                                                                                                                    21 ArgProtysProAspProTyrCysGlnAlaLysTyrThrPheCysProThrGlySerPro 40
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Tissue Procurement: ATCC
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                                                                                                                                                                                                                   CGTCCAAAACCTGATCCTTATTGTCAAGCTAAGTATACTTTCTGTCCAACTGGCTCACCT
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                                                                                                                                                          ATCCCAGTTATGGAGGGTGATGATGACATTGAAGTTTTTCGATTACAAGCCCCAGTATGG
                                                                                                                                                                         | IleProValMetGluGlyAspAspAspIleGluValPheArgLeuGlnAlaProValTrp
AsnCysThrPheProHisLeuArgProGluMetAspAlaProPheTrpCysAsnGlnGly
                                                               ArgSerThrLeuThrGlyLy8AsnTyrThrMetGluTrpTyrGluLeuPheGlnLeuGly
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Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone lib="NIH MGC 12"
/note="Torgan: cervix; Vector: pCMV-SPORT6; Site_1: NotI; Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.4 kb. Library prepared by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="IMAGE:5105093"
/tissue_type="cervical carcinoma cell line"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
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NISC_np06c07.yl NICHD_HS_Utl Homo
5, mRNA sequence.
CROIEAEC
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                                                                                                                                                                                                                                                                                                                                                                                                      Email: cgapbs-r@mail.nih.gov
cDNA Library Preparation:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tumor Gene Index
Unpublished (1997)
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/clone lib="NICHD HS Utl"
/clone lib="NICHD HS Utl"
/note="Torgan: uterus; Vector: pcMv-SPORT6.1.codb (Resden, /note="Torgan: uterus; Vector: pcMv-SPORT6.1.codb (Resden, /note="Torgan: uterus; Vector: pcMv-SPORT6.1.codb); Site 1: Notl; Site 2: EcoRV;
Invitrogen Corporation); Site 1: Row Invitrogen Corporative phase, from normal endometrial tissue (late proliferative phase, cycle day 13). Average insert size 1.9 kb. Library constructed by ResGen (Invitrogen Corporation)."
                                                                                                             /tissue type="normal endometrium,
phase, Gycle day 13"
/lab_host="DH10B (T1-resistant)"
                                                                                                                                                                                                             organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                              db_xref="taxon:9606"
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Search comple	Db 58;	Qy 18:	Db 52	Qy 16:	Db 462	Оу 12:	Db 34:	Оу 101	Db 28:	ΩУ 8:	22	Qy 6	Db 16.	Qy 4	Db 102	0у 2	Db 4	97	US-10-010-05	Alignment Sc Pred. No.: Score: Percent Simi Best Local S Query Match:
completed: April 25, 2004, 05:46:13	2 GAGACATGGTTTGATTCCTACGACTGTTCCAAATTTGTGTTAAGGACCTTT	1 GluThrTrpPheAspSerTyrAspCysSerLysPheV	2 AATGAAACAGGAATTTATTATGAGACATGGAATGTAAAAGCCAGCC	61 AsnGluThrGlyIleTyrTyrGluThrTrpAsnValLysAlaSerProGluLysGlyAla 180	41 GINVALAJAINTILESETGIYASNMETPHEASIGINMETALTYSTTYVALTYSGINASD 160 41 GINVALAJAINTILESETGIYASNMETPHEASIGINMETALTYSTTYVALTYSGINASD 160 62 CAAGTAGCAACTATATCAGGAAACATGTTCAACCAAATGGCAAAGTGGGTGAAACAGGAC 521	μ	42 AACTGTACATTTCCCCATCTCCGACCTGAAATGGATGCCCCTTTCTGGTGTAATCAAGGC 401		AGAAGTACATTAACTGGCAAGAACTACACAATGGAATGG	81 ArgSerThrLeuThrGlYLysAsnTyrThrMetGluTrpTyrGluLeuBheGlnLeuGly 100	2 GAATTTAAATATGGAGACCTCCTGGGACACTTGAAAATTATGCATGATGCCATTGGATTC	1 GluPheLysTyrGlyAspLeuLeuGlyHisLeuLysIleMetHisAspAlaI	62 ATCCCAGTTATGGAGGGTGATGATGACATTGAAGTTTTTCGATTACAAGCCCCAGTATGG 221	41 IleProValMetGluGlyAspAspAspIleGluValPheArgLeuGlnAlaProValTrp 60	.02 CGTCCAAAACCTGATCCTTATTGTCAAGCTAAGTATACTTTCTGTCCAACTGGCTCACCT 161	21 ArgProLysProAspProTyrCysGlnAlaLysTyrThrPheCysProThrGlySerPro 40	42 CGGGTCTCGGGCATCCCCTCCCGGCGCCACTGGCCGGTGCCCTACAAGCGCTTTGACTTC 101	1 ArgValSerGlyIleProSerArgArgHisTrpProValProTyrLysArgPheAspPhe 20)50A-2_COPY_31_346 (1-316) x CB215456 (1-641)	Match: 14.52e-116 Length: 641

Search completed: April 25, 2004, 05:46: Job time: 4028.01 secs

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Minimum DB
Maximum DB
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-MODEL-frame+ p2n.model -DEV=xlh
-QC/cgn2 1/USPTO spool/US10010050/runat 22042004 113205 27584/app_query.fasta_1.1372
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-DB=Published_Applications_NA -QFMT=fastap -SUFFIX=rnpb -MINMATCH=0.1
-LOOPCI-0 - UNITS=bits -START=1 -END=-1 -MATRIX=blosum62
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-THR_MIN-0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0
-MAXIEN=2000000000 -USER-US10010050 @CGN 1 1 776 @runat 22042004 113205 27584
-NCPU=6 -ICPU=3 -NO_MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCK=100
-LONGLOG -DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5
-FGAPOP=6 -FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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Maximum Match 100%
Listing first 45 summaries
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RESULT 1

US-09-122-383-1

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; Sequence 1, Application US/09122383A

Patent No. US20020042093A1

; GENERAL INFORMATION:

APPLICANT: Sheppard, Paul O.

APPLICANT: Sheppard, Paul O.

APPLICANT: Gilbertson, Debra G.

TITLE OF INVENTION: SECRETED PROTEINS ENCODED BY HUMAN

TITLE OF INVENTION: SECRETED PROTEINS ENCODED BY HUMAN

TITLE OF INVENTION: SECRETED PROTEINS ENCODED BY HUMAN

CURRENT APPLICATION NUMBER: US/09/122,383A

CURRENT FILLING DATE: 1998-07-24

EARLIER APPLICATION NUMBER: 60/053,613

EARLIER FILLING DATE: 1997-07-24

NUMBER OF SEQ ID NOS: 19

SOFTWARE: FASTSEQ for Windows Version 3.0

SEQ ID NO 1

SEQ ID NO 1

SEQ IDNA

ORGANISM: Homo sapien

FEATURE:

NAME/KEY: CDS

LOCATION: (47)...(1084)
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Result No.

Score

Query Match

Length

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Description

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                                                                GAATTTCTGTTGAGTCTCTTGCAAATTTTTTGATGCAGTGATTGTGCACAAACAGTTCTAT
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LENGTH: 1486
TYPE: DNA
ORGANISM: Homo s
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CURRENT FILING DATE: 2002-03-26
PRIOR APPLICATION NUMBER: US 09/122,383
PRIOR FILING DATE: 1998-07-24
PRIOR APPLICATION NUMBER: US 60/053,613
PRIOR FILING DATE: 1997-07-24
NUMBER OF SEQ ID NOS: 19
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APPLICANT: Gilbertson, Debra G.
TITLE OF INVENTION: SECRETED PROTEINS ENCODED
TITLE OF INVENTION: CHROMOSOME 13
FILE REPERENCE: 97-38C1
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NAME/KEY: CDS
LOCATION: (47)...(1084)
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CURRENT APPLICATION NUMBER: US/10/653,595
CURRENT APPLICATION NUMBER: US 09/397945
PRIOR APPLICATION NUMBER: US 09/397945
PRIOR FILING DATE: 1999-09-17
PRIOR FILING DATE: 1999-09-17
PRIOR FILING DATE: 1999-03-18
PRIOR FILING DATE: 1999-03-18
PRIOR FILING DATE: 1998-03-19
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,576
PRIOR APPLICATION NUMBER: 60/078,573
PRIOR APPLICATION NUMBER: 60/078,573
PRIOR FILING DATE: 1998-03-19
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PRIOR APPLICATION NUMBER: 60/078,579
PRIOR APPLICATION NUMBER: 60/078,579
PRIOR APPLICATION NUMBER: 60/080,314
PRIOR PRIOR DATE: 1998-03-19
PRIOR FILING DATE: 1998-04-01
PRIOR PRIOR DATE: 1998-04-01
PRIOR PRIOR DATE: 1998-04-01
PRIOR PRILING DATE: 1998-04-01
SEQ ID NO 26
LENGTH: 1751
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: SITE
LOCATION: (1520)
OTHER INFORMATION: n equals a,t,9, or FEATURE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Ruben et.
                                                                                                                                                      Remaining Prior Application data removed
NUMBER OF SEQ ID NOS: 470
SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                         PRIOR FILING DATE: 1998-03-19
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PRIOR FILING DATE: 1998-03-19
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CURRENT FILING DATE: 1999-09-17
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PRIOR FILING DATE: 1999-03-18
                                                                                                                                                                                                 PRIOR FILING DATE: 1998-04-01
NUMBER OF SEQ ID NOS: 470
SOFTWARE: Patentin Ver. 2.0
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NAME/KEY:
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                                                                            OTHER INFORMATION:
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LOCATION: (1520)
                                                                                                                                    ORGANISM: Homo sapiens
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APPLICANT: Gilbertson, Debra G.
TITLE OF INVENTION: SECRETED PROTEINS ENCODED
TITLE OF INVENTION: CHROMOSOME 13
FILE REFERENCE: 97-38
FILE REFERENCE: 97-38
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LOCATION: (1)...(1038)
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TITLE OF INVENTION: SECRETED PROTEINS ENCODED BY HUMAN
TITLE OF INVENTION: CHROMOSOME 13
FILE REFERENCE: 97-38C1
CURRENT APPLICATION NUMBER: US/10/010,050A
CURRENT FILING DATE: 2002-03-26
PRIOR APPLICATION NUMBER: US 09/122,383
PRIOR FILING DATE: 1998-07-24
PRIOR APPLICATION NUMBER: US 60/053,613
PRIOR FILING DATE: 1997-07-24
INUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 13
LENGTH: 1038
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; FEATURE:

NAME/KEY: misc feature

; LOCATION: (1)...(1038)

CTHER INFORMATION: n = A,T,C

US-10-010-050A-13
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Publication No. US20020173624A1
GENERAL INFORMATION:
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                                                                                         FEATURE: OTHER INFORMATION: Degenerate nucleotide sequence encoding zsig46 OTHER INFORMATION: polypeptide of SEQ ID NO:2
                                                                                                                                                  ORGANISM: Artificial Sequence
                                                                                                                                                                     TYPE: DNA
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                                             TYTAYAAYTTYGARTAYTGGTTYYTNCCNATGAARTTYCCNTTYATHAARATHACNTAY
                                                                       PheTyrAsnPheGluTyrTrpPheLeuProMetLysPheProPheIleLysIleThrTyr
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FRATURE:
FORMATION: MAP TO ACO01226.1
FOTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 4.5
OTHER INFORMATION: EXPRESSED IN PRAIN, SIGNAL = 6.3
OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 5.9
OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 5.9
OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 3.6
OTHER INFORMATION: EXPRESSED IN HILA, SIGNAL = 3.6
OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 3.9
OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 3.9
OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 5.3
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PRIOR FILING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-05-26
PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILING DATE: 2000-08-03
PRIOR FILING DATE: 2000-08-03
PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR FILING DATE: 2000-10-04
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SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
SEQ ID NO 22592
LENGTH: 494
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CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
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PRIOR APPLICATION NUMBER: US 09/774,203
PRIOR FILING DATE: 2001-01-29
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ICR FILING DATE: 2000-10-04
ICR FILING DATE: 2000-10-04
ICR FILING DATE: 2000-09-27
ICR FILING DATE: 2000-09-27
ICR FILING DATE: 2001-01-30
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ICR FILING DATE: 2001-01-30
ICR APPLICATION NUMBER: PCT/US01/00664
ICR FILING DATE: 2001-01-30
ICR APPLICATION NUMBER: PCT/US01/00664
ICR FILING DATE: 2001-01-30
ICR APPLICATION NUMBER: PCT/US01/00669
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ICR FILING DATE: 2001-01-30
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APPLICATION NUMBER: US 60/234,687
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APPLICATION NUMBER: PCT/US01/00670
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Hanzel, David K.
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Publication No. US2002
GENERAL INFORMATION:
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                                                                                                                                                                  Merberg, David
Treacy, Maurice
Spaulding, Vikki
TITLE OF INVENTION: SECRETED, E
NUMBER OF SEQUENCES: 1519
CORRESPONDENCE ADDRESS:
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy Disk
COMPUTER: 1BM PC COmpatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
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                                                                                                CITY: Cambridge
STATE: Massachusetts
COUNTRY: U.S.A
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                                                                                                                                         ADDRESSEE: Genetics Institute,
STREET: 87 CambridgePark Drive
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McCoy, John
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LaVallie, Edward
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Matches:
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Indels:
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CURRENT APPLICATION NUMBER: US/09/864,761
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TOPOLOGY: linear

MOLECULE TYPE: cDNA
SEQUENCE DESCRIPTION: SEQ ID
US-10-040-739-825
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Best Local Similarity:
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GENERAL INFORMATION:
APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
FILE REFERENCE: Aeomica-X-1
                                                                                                                                                                           Sequence 5832, Application US/09864761 Patent No. US20020048763A1
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REGISTRATION NUMBER: 32,724
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 09/036,520 FILING DATE: 03-JUN-1998 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                             241 ThrLeuGlyLeuAlaIleLysArgPheTyrTyrProPhe 253
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TYPE: nucleic acid
STRANDEDNESS: double
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FILING DATE: 07-Jan-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: (617) 498-8224
TELEFAX: (617) 876-5851
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                                                 PROBES USEFUL
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FOR

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FEATURE:

FEATURE:

OTHER INFORMATION: MAP TO ACO01226.1

OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 4.5

OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 6.3

OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 5.0

OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 3.6

OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 3.6

OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 3.9

OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 4.2

OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 4.2

OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 5.3
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                                                                                                                                                 US-10-010-050A-2_COPY_31_346 (1-316) x US-09-864-761-5832 (1-474)
                                                                                                                                                                                                           Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                        Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                       Score:
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PRIOR APPLICATION NUMBER: US 09/632,366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 60/207,456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US
PRIOR FILING DATE: 2000-02-04
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TYPE: DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US 09/608,408 FILING DATE: 2000-06-30
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APPLICATION NUMBER: PCT/US01/00668
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: PCT/US01/00670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: PCT/US01/00661 FILING DATE: 2001-01-30
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APPLICATION NUMBER: PCT/US01/00662
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/US01/00669 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 60/236,359
                                      143
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                      AlaThrIleSerGlyAsnMetPheAsnGlnMetAlaLysTrpValLysGlnAspAsnGlu
                                                                                                          CysPhePheGluGlyIleAspAspValHisTrpLysGluAsnGlyThrLeuValGlnVal
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-CTAGGAAACATGTTCAACCAAATGGCAAAGTGGGTGAAACAGGACAATGAA
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684.50
86.67%
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                                                                                                                                                                                       Gaps:
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1
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144
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APPLICANT: Birse et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, an FILE REFERENCE: PA1391
CURRENT APPLICATION NUMBER: US/10/264,049
CURRENT FILING DATE: 2002-10-04
PRIOR APPLICATION NUMBER: PCT/US01/18569
PRIOR FILING DATE: 2001-06-07
PRIOR FILING DATE: 2001-06-07
PRIOR FILING DATE: 2000-06-07
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US-10-264-049-1859
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SEQ ID NO 1859
LENGTH: 497
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1859, Application US/10264049
Publication No. US20040005579A1
                                                             OTHER IN
FEATURE:
                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc_feature
LOCATION: (175)..(175)
OTHER INFORMATION: n e
                                                                                                                                                                                                                                                                                                                                                                                                                 FRATURE:
NAME/KEY: misc feature
LOCATION: (2)..(2)
                                                                                                                                                                                                                                                                                       NAME/KEY: misc_feature
LOCATION: (285)..(285)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
                           NAME/KEY: misc feature LOCATION: (331)..(331)
                                                                                                                                                                                                     NAME/KEY: misc_feature
LOCATION: (295)..(295)
OTHER INFORMATION: n equals
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Homo sapiens
           LOCATION: (331)..(331)
OTHER INFORMATION: n e
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                                                                                                                                                         NAME/KEY: misc feature LOCATION: (313)..(313)
                                                                                                                                                                                                                                                      FEATURE:
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                                                                                                                                                                                                                                                                                                                                                                                          FEATURE
EATURE
                                                                                          NAME/KEY: misc_feature
LOCATION: (323)..(324)
                                                                                                                                                                                           EATURE:
                                                                         INFORMATION: n equals
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APPLICANT: AGLATE, Paul A.

APPLICANT: Jones, Robert
APPLICANT: Jones, Robert
APPLICANT: Harlocker, Susan L.

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
FILE REFERENCE: 210121.497
CURRENT APPLICATION NUMBER: US/09/867,701
CURRENT FILING DATE: 2001-05-29
NUMBER OF SEQ ID NOS: 10912
SOFTMARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 2579
LENGTH: 351
                                                                                                                                                                                                                                                               RESULT 11
US-09-867-701-2579
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                                                                                                                                                                                                               Sequence 2579, Application US/09867701 Patent No. US20020132237A1 GENERAL INFORMATION:
TYPE: DNA
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OTHER INFORMATION: n equals
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OTHER INFORMATION: n equals
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LOCATION: (464)..(464)
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OTHER INFORMATION: n equals
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LOCATION: (440)..(440)
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LOCATION: (395)...(395)
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Matches:
Conservative:
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Indels:
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CURRENT APPLICATION NUMBER: US/09/954,456
CURRENT FILING DATE: 2001-09-18
PRIOR APPLICATION NUMBER: US/60/233,617
PRIOR FILING DATE: 2000-09-18
PRIOR APPLICATION NUMBER: US/60/234,052
PRIOR APPLICATION NUMBER: US/60/234,923
PRIOR FILING DATE: 2000-09-25
PRIOR APPLICATION NUMBER: US/60/234,923
PRIOR FILING DATE: 2000-09-25
PRIOR APPLICATION NUMBER: US/60/235,637
PRIOR PILING DATE: 2000-09-26
PRIOR APPLICATION NUMBER: US/60/235,637
PRIOR PILING DATE: 2000-09-26
PRIOR APPLICATION NUMBER: US/60/235,637
PRIOR PILING DATE: 2000-09-26
PRIOR APPLICATION NUMBER: US/60/235,638
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Query Match:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION
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Patent No. US20020115057A1
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               APPLICATION NUMBER: US/60/235,863 FILING DATE: 2000-09-27
                                                     FILING DATE: 2000-09-27
APPLICATION NUMBER: US/60/235,840
FILING DATE: 2000-09-27
                                                                                                      APPLICATION NUMBER: US/60/235,720
                                                                                                                           APPLICATION NUMBER: US/60/235,711
FILING DATE: 2000-09-27
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NOS: 2276
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Conservative:
Mismatches:
Indels:
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AND

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CURRENT APPLICATION NUMBER: US/09/908,975
CURRENT FILING DATE: 2001-07-20
PRIOR APPLICATION NUMBER: US 60/287,724
PRIOR FILING DATE: 2001-05-02
PRIOR APPLICATION NUMBER: US 60/221,607
PRIOR APPLICATION NUMBER: US 60/221,607
PRIOR FILING DATE: 2000-07-28
NUMBER OF SEQ ID NOS: 32337
SOPTWARE: PATENTIN VERSION 3.0
SEQ ID NO 10339
LENGTH: 60
                      RESULT 14
US-10-198-846-9753/c
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Best Local Similarity:
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Best Local Similarity:
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; ORGANISM: Homo sapiens
US-09-954-456-1363
                                                                                                                                                                                                                                                                                Pred. No.:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 10339, Application US/09908975
Publication No. US20030165843A1
GENERAL INFORMATION:
APPLICANT: SHOSHAN, Avi
APPLICANT: WASSERMAN, Alon
APPLICANT: MINTZ, Eliat
APPLICANT: MINTZ, Liat
APPLICANT: FAIGLER, Sinchon
TITLE OF INVENTION: OLIGONUCLEOTIDE LIBRARY FOR DETECTING RNA TRANSCRIPTS AND SPLICE
FILE REFERENCE: 36688-0005
FILE REFERENCE: 36688-0005
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LENGTH:
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SEQ ID NO 1363
LENGTH: 473
                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Homo sapiens
                                                                       9753,
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     Application US/10198846
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; GENERAL INFORMATION:
APPLICANT: Lillie, James
; APPLICANT: Lillie, James
; APPLICANT: Xu, Yongyao
APPLICANT: Wang, Youzhen
; APPLICANT: Steinmann, Kathleen
; APPLICANT: Steinmann, Kathleen
; APPLICANT: Steinmann, Kathleen
; TITLE OF INVENTION: FOR IDENTIFICATION, ASSESSMENT, PRI
; TITLE OF INVENTION: THERAPY OF BREAST CANCER
; TITLE OF INVENTION THERAPY OF BREAST CANCER
; TILLE REFERENCE: MRI-049
; CURRENT APPLICATION NUMBER: US/10/198,846
; CURRENT FILING DATE: 2002-07-18
; PRIOR APPLICATION NUMBER: 60/306,220
; PRIOR FILING DATE: 2001-07-18
; NUMBER OF SEQ ID NOS: 14084
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Best Local Similarity:
Query Match:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-198-846-9753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 9753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc_feature
LOCATION: 2667
OTHER INFORMATION: n =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 2667
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
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                                                                                                                                                                             1344 ATCACTGTTCAAATATGTGGCAAGGTGAGGCTCTCTGTCCCCCTTTACCAGGAGCACGGA 1285
                                                                                                                                                                                                                                                  1401 GGGTGTTCTGCTCTTTACTAAATA---ÄÄCGTTCCCTTCCCÄGAAACCAGCCCCAAACTC 1345
                                                                                                                                                                                                                                                                                                                         1455 AGCCTTCTCCAGAGTGTTTGCGACTCACGGTCCACATGTCCCAACAAA-----ACGCAA 1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1554 CAACATGGACCAGCCCCACAGCTGAGGCCATCTCCTCACTGAGCCTGGGACCAGGTCCAC 1495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1674 CCCTGGCCCGGGCCTCCTTGTGCACACACCCAGGCCTTCCCCAGAACACGAGAGCACCGGG 1615
                                                                                                                                           116
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                                                                                                                                                                                                                                                                                    92 GluTrpTyrGluLeuPheGlnLeuGlyAsnCysThrPheProHisLeuArgProGlu--- 110
                                                                                                                                                                                                                                                                                                                                                          72 LysIleMetHisAspAlaIleGlyPheArgSerThrLeuThrGlyLyaAsnTyrThrMet 91
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leSerGlyAsnMetPheAsnGlnMetAlaLys---
                                  TGCCAAATACAGGACTGTGAGCGGCTCGGGAGGGGGTCTCCTTTGCTCCCATCCAGCGGG 1165
                                                                                                                                           TrpCysAsnGlnGlyAlaAlaCysPhePheGluGly------
                                                                                                                                                                                                                                                                                                                                                                                                 GTAATGTGTCTTCAGTCCCCG---TGGGAATGG-----
                                                                    ------IleAspAspValHis--TrpLysGluAsnGlyThrLeuValGlnValAlaThrI 145
                                                                                                        TGGTGTCTGCAAGGCAGTGCCTCTGAGTGTCAGGGAGATGGCCCCTCAGGCTCCCAAACC 1225
                                                                                                                                                                                                                                                                                                                                                                                                                                ValPheArgLeuGlnAlaProValTrpGluPheLysTyrGlyAspLeuLeuGlyHisLeu 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----SerProlleProValMetGluGlyAsp-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ProLysProAspProTyrCysGlnAlaLysTyrThrPhe--
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Conservative:
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-----TGGCATCTC

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AspAspIleGlu

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---TrpValLysG 159

127

Alignment Scores: Pred. No.: Score: Percent Similarity: Percent Similarity: Dest Local Simi	RESULT 15 US-10-369-493-36401 Sequence 36401, Applica publication No. US20038 GENERAL INFORMATION: GENERAL Hinkle, Gr APPLICANT: Gladman, General G	873	275	Oy 259 hrL	Db 993 CC	1000 -	Q у 219 eu	Оу 199 ув Db 1001	1053	Db 1110 CJ	Qy 159 lr	Db 1164 TC
Pes: 0.0287 Length: 97.50 Matches: Conservative: 26.11% Mismatches: 1.55% Indels: Gaps: -2_COPY_31_346 (1-316) x US-10-369-493 ThrLeuValGlnValAlaThrleSerGlyAsnMetPh	Application US/103 US20030233675A1 TION: , Yongwei , Yongwei , Keven C. ldman, Barry S. en, Xianfeng TION: EXPRESSION OF TION: PLANTS WITH : 38-10(52052)B ATION NUMBER: US/10 DATE: 2003-02-28 ION NUMBER: US 60/3 ATE: 2002-02-21 ID NOS: 47374 DI NOS: 47374	TCTGCAGCAATTTTATTCTTTTCCAGTCTTTT	Hislwedin Dhemarican Dhemar	CLysGluPheLei	CCIGCICCITGEGCIGACCGGGIC		uTyrSerGlyGluProThrTyrLe	sLeuAlaGluPheGlyAlaGluPh	GAAACTGGGCACTTC	CAGCACĠĀĠCCĀĠĠĪ	lnAspAsnGluThrGlyIleTyrTy :::	: :::::: CAGCGGGTCCTTGCGGGGGAGAAA
1.00287	69493 MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION IMPROVED PROPERTIES /369,493	ERBIEDE 285 :: GICITIT 842	ICIGGCGCTTCTTCCGGCGCTTTGCGGTCTGCTCC 874	hrlysGlu PheLeuLeuSerLeuLeuGlnIlePheAspAlaValIleV 275	GCTGACCGGGTCCTTCTTGTTTCTTCTGTTCAAGTTTCATCTTCTTT 934	GCTGGAC 994	erGlyGluProThrTyrLeuGlyAsnGluThrSerValPheGlyProThrGlyA 239	aGluPheGlyAlaGluPheLysAsnIleGluThrAsnTyrThrArgIlePheL 219	CTCCTCCTCTCTGTTCCAGATGCCTCGCGAGAGCT:00	CACAGCACGAGCCAGGTTCCAGGCAGAGGCTGTGGCAAACATTGTCATCGCCCCATG 1054	VIleTyrTyrGluThrTrpAsnValLysAlaSerProGluLysG :179	:: :::::: TCAGCGGGTCCTTGCGGGGGAGAAAGAGCCCAAACAGCCGCCTTTCCCTTCTGGT :1111
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516 GAGAAGGAG------CTCGGTGTATTCTTTGACACTGTGATTGTG 554
                                   219 LeuTyrSerGlyGluProThrTyrLeuGlyAsnGluThrSerValPheGlyProThrGly 238
                                                                                                           259 ThrLysGluPheLeuLeuSerLeuLeuGlnIlePheAspAlaValIleVal 275
                                                                                                                                                  348 AGACTCGAT-----ATGTCCGGC 365
                                                                                                                                                                 183 TrpPheAspSerTyrAspCysSerLysPheValLeuArgThrPheAsnLysLeuAlaGlu 202
                                                                                                                                                                                     163 ThrGlyIleTyrTyrGluThrTrpAsnValLysAlaSerProGluLysGlyAlaGluThr 182
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Search completed: April 25, 2004, 06:14:09 Job time: 636.806 secs

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Command line parameters:

-MODEL=frame+ p2n.model -DEV=xlh
-Q=/cgn2_1/USFTO_spool/US10010050/runat 22042004 113205 27569/app_query.fasta_1.1372
-Q=/cgn2_1/USFTO_spool/US10010050/runat 22042004 113205 27569/app_query.fasta_1.1372
-DB=ISsued_Pateents_NA -QFMT=fastap_SUFFTX=rni_-MINMATCH=0.1 -LOOPCL=0
-DOPEXT=0_-UNITS=bits_START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pot -THR_MAX=100 -THR_MIN=0 -ALIGN=15
-MODE=LOCALI_-OUTEMT=pto_-NORM=set_+HEAPSIZE=500 -MINLEN=0 -MAXLEN=20000000000
-USER=US10010050_GCGN_1_1_140_@runat_22042004_113205_27569 -NCPU=6 -ICPU=3
-NO_MMAP_-LARGEQUERY_-NEG_SCORES=0 -WAIT_-DSPBLOCK=100 -LONGLOG
-DEV_TIMEDUT=120 -WARN_TIMEDUT=30 -THREADS=1 -XGAPDE=10 -XGAPEXT=0.5 -FGAPDP=6
-FGAPEXT=7 -YGAPDP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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score greater
and is derived
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    nucleic search, using frame_plus_p2n model

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Match
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                                                                                                                                                                                                                                                                   Issued_Patents_NA:*
1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*
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US-08-290-448A-73

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US-08-175-069A-73

US-08-461-039B-73

US-08-464-000-73

US-08-464-000-73

US-08-290-448A-58

US-08-290-448A-58

US-08-175-069A-58

US-08-461-939B-58

US-08-464-000-58
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1671.819 Million cell updates/sec
Sequence 2, Appli
Sequence 244, App
Sequence 73, Appl
Sequence 58, Appl
                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                                      US-09-108-006C-2
; Sequence 2, Application US/09108006C
; Patent No. 6524613
; GENERAL INFORMATION:
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                                            US-07-792-600-1
US-09-157-021-1
US-09-156-842-1
US-09-591-514-1
US-09-591-514-35
US-09-620-312D-253
US-09-976-594-101
US-09-976-594-101
US-09-597-884-1
US-09-643-990A-1
US-09-643-990A-1
US-09-322-478-22
US-09-489-039A-633
US-09-489-039A-633
US-09-489-039A-638
US-09-489-039A-529
US-09-489-039A-529
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US-09-489-039A-529
US-09-489-039A-529
       US-08-384-106A-4
Sequence 1, Appli sequence 1, Appli sequence 1, Appli sequence 35, Appli sequence 35, Appli sequence 35, Appli sequence 35, Appli sequence 253, Appli sequence 253, Appli sequence 219, Appli sequence 20, Appli sequence 1011, Appli sequence 1, Appli sequence 10, Appli sequence 10, Appli sequence 22, Appli sequence 22, Appli sequence 22, Appli sequence 514, Appli sequence 5147, Appli sequence 529, Appli sequence 5290, Appli sequence 3, Appli sequence 4, Appli
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ALIGNMENTS

Clifford J.

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ZIP: 18940

COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION UNMBER: US/09/108,006C
FILING DATE: 30-Jun-1992
CLASSIFICATION: CURKNOWN>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
ADDRESSEE: Kimeragen, Inc.
STREET: 300 Pheasant Run
CITY: Newtown
STATE: PA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Hepatocellular Chimeraplasty NUMBER OF SEQUENCES: 62
APPLICATION NUMBER: 60/054,837
FILING DATE: 05-AUG-1997
APPLICATION NUMBER: 60/064,996
FILING DATE: 10-NOV-1997
APPLICATION NUMBER: 60/074,497
                                                                                                                    APPLICATION NUMBER: 60/054,288 FILING DATE: 30-APR-1997
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Bandyopadhyay, Paramita
Roy-Chowdhury, Jayanta
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Query Match:
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.:
                                                                                                                                                                                                       12372 AGAAGTGTCTTCAAAGCTGAGAAGAAATCTGCAGGACCATGCTGAGTGGGTTTATCAA--
                                                                                                                                                                                                                                                                          12312 AGGGGTCCTTTATGATTATGTCAACAAGTACCACTGGGAACACACAGGGCTCACCCTGAG 12371
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                                                                                                                                                                                                                                                                                                         121 aAlaCysPhePheGluGlyIlcAspAspValHisTrpLysGluAsnGly---ThrLeuVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 29258
REFERENCE/DOCKET NUMBER: 7991-015-999
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                101 nCysThrPheProHisLeuArgProGluMetAspAlaProPheTrpCysAsnGlnGlyAl 121
                                                                                                                                                                                                                                                                                                                                                                                                                                               81 gSerThrLeuThrGlyLysAsnTyrThrMetGluTrpTyrGluLeuPheGlnLeuGlyAs 101
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                              uAlaGluPheGlyAlaGluPheLysAsnIleGluThrAsn---TyrThrArgIlePheLe
                                                                                                  aGluThrTrpPheAspSerTyrAspCysSerLysPheValLeuArgThrPheAsnLysLe
                                                                                                                                                                                                                                      lGlnValAlaThrIleSerGlyAsnMetPheAsnGlnMetAlaLysTrpValLysGlnAs 160
                                                                      CAGTGGGACCACTGGGACCTACCAA----
                                                                                                                                                                     pAsnGluThrGlyIlleTyrTyrGluThrTrpAsnValLysAlaSerProGluLysGlyAl 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCAGCAGCCTCCCCAGCCGTAGGCAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ValSerGlyIleProSerArgArgHisTrpProValProTyrLysArgPheAsp-PheAr 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      uPheLysTyrClyAspLeuLeuGlyHisLeuLysIleMetHisAspAlaIleGlyPheAr 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         eProValMetGluGlyAspAspAspIleGluValPheArgLeuGlnAlaProValTrpGl 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 14070 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
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                                                                                                                                        GGGGCCATTAGGGAAATTGATGATATCGACGAGAGGTTCCAGAAAGGAGC
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94.50
34.57%
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5.38%
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GAGTGGAAGGACAAGGCCCAGAATCTGTACCAGGAACTGTTGAC ::2548
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Matches:
Conservative:
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APPLICANT: Furness, Michael
APPLICANT: Buchbinder, Jenny
TITLE OF INVENTION: GENES EXPRESSED IN C3A I
FILE REFERENCE: PA-0041 US
CURRENT FILING DATE: 2001-10-12
PRIOR APPLICATION NUMBER: US/09/976,594
CURRENT FILING DATE: 2000-10-12
PRIOR FILING DATE: 2000-10-12
PRIOR FILING DATE: 2000-10-12
VINMBER OF SEQ ID NOS: 1143
SOFTWARE: PERL Program
SEQ ID NO 244
LENGTH: 7718
TYPE: DNA
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
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Patent No. 6673549
GENERAL INFORMATION:
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LOCATION: 6339-6362, 6967-7026
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OTHER INFORMATION: Incyte ID No.
                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: a, t, c,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
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3563 ATGGÁTGAGGÁCTTTTGCAGTCGCCTGAGGGAAGGCATGAGGATGAGAGCTCCTGAGTAC 3622
                                                                      3503 TACGGAGTATTGCTGTGGGAAATCTTCTCCTTAGGTGGGTCTCCATACCCAGGAGTACAA
                                                                                                                                                 3443 TGGATGGCTCCCGAATCTATCTTTGACAAAATCTACAGCACCAAGAGCGACGTGTGGTCT 3502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12669 GAACTTCCCCAGATTCCAGTTTCCGGGGAAACCTGGGATATACACTAGGGAGGAACTTTG 12728
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                                       46 GlyAspAspAspIle-
                                                                                                              29 GlnAlaLysTyr----
                                                                                                                                                                                   11 TrpProValProTyrLysArgPheAsp-----PheArgProLysProAspProTyrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               219 uTyrSerGlyGluProThrTyrLeuGlyAsnGluThrSerValPheGlyProThrGlyAs
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                                                                                                                                                                                                                                                                   1.35
91.50
31.40%
20.64%
5.20%
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                                                                                                              ----ThrPheCysProThrGlySerProIleProValMetGlu 45
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Matches:
Conservative:
Mismatches:
Indels:
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UESULT 3
IS-08-290-448A-73
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                                                                                                   GENERAL INFORMATION:
APPLICANT: ROGERS, Bruce
APPLICANT: Klapper, David G.
APPLICANT: Rafnar, Thorunn
APPLICANT: Kuo, Mei-chang
                                   APPLICANT: Kuo, Mei-chang
TITLE OF INVENTION: Allergenic Proteins
NUMBER OF EEQUENCES: 93
CORRESPONDENCE ADDRESS:
                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                               4346
                                                                                                                                                                                                                                                                                                                                4406 ATAGTGCTTTTT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4106 GATGTCAGCAGGCCCAGTTTCTGCCATTCCAGCTGTGGGCACGTCAGCGAAGGCAAGCGC 4165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4046 AAGGCCTCGCTCAAGATTGACTTGAGAGTAACCAGTAAAAGTAAGGAGTCGGGGCTGTCT 4105
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3683 CCAAGATTTGCAGAACTTGTGGAAAAACTAGGTGATTTGCTT---CAAGCAAATGTACAA :739
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                                                                                                                                                                                                                                                                                                                                                                             LeuGlnIlePhe 270
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTTCTAGAAGCÁCATGTGTÁTTTATACCCCCAGGÁÁACTAGCTTTTGCCAGTATTATGC 4345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCAGCACTCTGTTGĠĊĊŤĊŤĊĊĊATGCTGAAGCGCTTCÁĊĊŤĠĠACTĠÁĊÁĠĊAAACCC 4045
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CysSer-----LysPheValLeuArgThrPheAsnLysLeuAlaGluPheGly-----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCTTCAAGGAAAGTATTTCAGCTCCGAAGTTTAATTCAGGAAGCTCTGATGATGATGAGA 3886
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                  LAHIVE
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                & COCKFIELD
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                                                                         From Ragweed and Uses
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DB:
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Best Local Similarity:
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PRICE APPLICATION DATA:
PRICE APPLICATION DATA:
APPLICATION NUMBER: US 07/529,951
APPLICATION NUMBER: US 07/325,365
FILING DATE: May 29, 1990
APPLICATION NUMBER: US 07/325,365
FILING DATE: March 17, 1989
ATTORNEY/AGENT INFORMATION:
NAME: Amy E Mandiagouras
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: IMI-018CN
TELEPONE: (617)227-7400
TELEPAX: (617)227-7400
TELEPAX: (617)227-5941
THRORDMATION FOR SECT TO NO. 73.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (617)227-5941
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1349 base pair
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FEATURE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: 1ir
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OPERATING SYSTEM: PC-DOS/MS-DOS
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148 AsnMetPheAsnGlnMetAlaLysTrpValLysGlnAspAsnGluThrGlyIleTyr---
                                                                                                                                                                                                 108 ArgProGluMetAspAlaProPheTrpCysAsnGlnGlyAlaAlaCysPhePheGluGly 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    526 TGTCCAGGAGGCATGATTAAGTCCAACGATGGTCCACCAATTTTAAGACAACAAAGTGAT 585
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                                                                                                                                                                                                                                                                                                                                                                                68 LeuGlyHisLeuLysIleMetHisAspAlaIleGlyPheArgSerThrLeuThrGlyLys 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48 AspAspIleGluValPheArgLeuGlnAlaProValTrpGluPheLysTyrGlyAspLeu 67
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                                                                  GCTGATGACACCCATTATCAAGATAAAGGCATGCTA-----
                                                                                                       IleAspAspValHisTrpLysGluAsnGlyThrLeuValGlnValAlaThrIleSerGly 147
                                                                                                                                                                                                                                                                                                                                        ATCGACCATTGCTCGCTCAGTAAGGCTTCCGATGGGCTGCTCGATATCACCCTCGGCAGC 684
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US-08-290-448A-73
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       APPLICATION NUMBER: US 07/529,951
FILING DATE: May 29, 1990
APPLICATION NUMBER: US 07/325,365
FILING DATE: March 17, 1989
ATTORNEY/AGENT INFORMATION:
NAME: Amy E. Mandragouras
REGISTRATION NUMBER: 36,207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                        FILING DATE: August 15, 1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/529,951
FILING DATE: May 29, 1990
                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IRM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/290,448A
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Klapper, David G.
APPLICANT: Rafnar, Thorunn
APPLICANT: Kuo, Mei-chang
TITLE OF INVENTION: Allergenic Proteins
NUMBER OF SEQUENCES: 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Rogers, Bruce
APPLICANT: Klapper, David
APPLICANT: Rafnar, Thorus
APPLICANT: Kuo, Mei-chand
                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
                                                                                                                                                                                                                                                                                                                                                          STREET: STREET: STREET:
                                                                                                                                                                                                                                                                                                                   COUNTRY: USA
ZIP: 02109-1875
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IMI-018CN
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Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-010-050A-2_COPY_31_346 (1-316) x US-08-290-448A-73 (1-1349)
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1349 base pair
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TELEPHONE: (617)227-7400
TELEFAX: (617)277-5941
FORMATION FOR SEQ ID NO: 73:
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STRANDEDNESS: sing
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       1054 GCTATTTTTCTCCCATCCGGGTCTGATCCAGTGCTAACCCCTGAGCAAAAAGCAGGGATG 1113
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                                         SerValPheGlyProThrGly---AsnLysThrLeuGlyLeuAlaIleLysArgPheTyr 250
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                                                                                                                      ThrAsnTyrThrArgIlePheLeuTyrSerGlyGluProThrTyrLeuGlyAsnGluThr 231
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Matches:
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684 87 67 585 47

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Percent Similarity:
Best Local Similarity:
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US-08-175-069A-73
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GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION UMBER: US 07/529,951
FILING DATE: May 29, 1990
APPLICATION UMBER: US 07/525,365
FILING DATE: March 17, 1989
ATTORNEY/AGENT INFORMATION:
NAME: Amy E. Mandragouras
REGISTRATION UTMBER: 36,207
REFERENCE/DOCKET NUMBER: INI-018DV
TELECOMMUNICATION: TREORMATION:
                                                                                                                                                                                                                                                                                                                            TELEFAX: (617)227-5941 INFORMATION FOR SEQ ID NO: 73:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPUTER: OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                 No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Rogers,
APPLICANT: Klapper,
APPLICANT: Rafnar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Kuo, Mei-chang
TITLE OF INVENTION: Allergenic Proteins
NUMBER OF SEQUENCES: 93
                                                                                                                                                                                    NAME/KEY:
                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/175, FILING DATE: December 29, 1993
                                                                                                                                                                                                                                                                                                                                                              TELEPHONE:
                                                                                                                                                                     LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 02109-1875
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      251 TyrProPheLysProHisLeuProThrLysGluPheLeuLeuSerLeuLeuGlnIlePhe
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60 State Street
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Rafnar, Thorunn
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                                                                           Length:
Matches:
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US-08-461-939B-73
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                  Sequence 73, Application US/08461939B Patent No. 6335019 GENERAL INFORMATION:
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   APPLICANT:
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                                                                                                                           1264 TTATATGAA-
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                                                                                                                                                   ThrTyrGluGluIleProLeuProIleArgAsnLysThrLeu 313
                                                                                                                                                                                           TATAATAATCATAAATACTTATTTTATTTTATT-
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                                                                                                                                                                                                                                                            GGTGTACTCTCATGCCÁTCAAGGAGCACCTTGCTAAGCACCTGGCCÁÁTTCCTAAGCTTT
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Rogers, Bruce
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                                                                                                                     CCATTACGTTCAAGTACTCTA
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Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-461-939B-73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (617)742-4214
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/461,939B FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08/464,000
FILING DATE: 05-JUN-1995
APPLICATION NUMBER: US 08/290,448
FILING DATE: 15-AUG-1994
APPLICATION NUMBER: US 07/529,951
FILING DATE: 29-MAY-1990
APPLICATION NUMBER: US 07/325,365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: IM
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 17-MAR-1989
ATTORNEY/AGENT INFORMATION:
NAME: Amy E. Mandragouras
REGISTRATION NUMBER: 36,207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                              No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                               Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Kuo, Mei-chang
TITLE OF INVENTION: Metho
TITLE OF INVENTION: Prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                              35 CYSPro----
                                                                                                                       GGTGATGCTATAAATGTTGCTGGTAGTTCACAAATATGG----
        AsnTyrThrMetGluTrpTyrGluLeuPheGlnLeuGlyAsnCysThrPheProHisLeu 107
                                                      ATCGACCATTGCTCGCTCAGTAAGGCTTCCGATGGGCTGCTCGATATCACCCTCGGCAGC
                                                                                     LeuGlyHisLeuLysIleMetHisAspAlaIleGlyPheArgSerThrLeuThrGlyLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleic acid
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Protein Allergen Using Peptides Which Inloude A T Cell Epitopo
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                                                                                                                                                                                                                                                                                                        Conservative: Mismatches: Indels:
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                                                                                                                                                                                                                                                                                                                  Patent No.
                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
                                                                                                                                                                                                      APPLICANT: Rogers, Bruce
APPLICANT: Klapper, David G.
APPLICANT: Rafnar, Thorunn
APPLICANT: Kuo, Mei-chang
TITLE OF INVENTION: Allergenic Peptides from Ragweed Pollen
                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                     COUNTRY:
                                                                                                                                  CITY: Boston
                                                                                                                                                     STREET:
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                                                                                                                    Massachusetts
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTATACTCAGCCAAGGGAACAGATTCTTCGCCCCCGATGATATCATCAAG------
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                                                                                                                                                   60 State Street
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                                                                                                                                                                 & COCKFIELD,
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                                                                                                                                                                                                                                                                                                                                                                                              CCATTACGTTCAAGTACTCTA 1293
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     Version
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Percent Similarity:
Best Local Similarity:
Query Match:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 08/290,448
FILING DATE: 15-AUG-1994
APPLICATION NUMBER: US 07/529,951
FILING DATE: 29-MAY-1990
APPLICATION NUMBER: US 07/325,365
FILING DATE: 17-MAR-1989
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (617)227-5941
INFORMATION FOR SEQ ID NO: 73:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Amy E. Mandragouras
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: IM-
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/01
FILING DATE: 05-JUN-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: CDNA
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TYPE: nucleic acid
STRANDEDNESS: single
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                       Thr-
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                                                            GTCGTTAACAACAACTACGACAGATGGGGAACGTACGCCATCGGTGGTAGCTCGGCCCCA 915
                                                                                                                                                                                AsnMetPheAsnGlnMetAlaLysTrpValLysGlnAspAsnGluThrGlyIleTyr--- 166
                                                                                                                                                                                                                             GCTGATGACACCCATTATCAAGATAAAGGCATGCTA----
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                                                                                                                                           AACATGTTCACCGATCACGTTGACCAAAGAATGCCTAGATGTAGATTTGGGTTTTTCCAA
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                 -TrpPheAspSerTyrAspCysSerLysPheValLeu 134
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Matches:
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US-08-290-448A-58
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                                                                             INFORMATION FOR SEQ ID NO:
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APPLICANT:
APPLICANT:
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                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Amy E. Mandragouras
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: IM
                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/290,448A FILING DATE: AUGUST 15, 1994 PRIOR APPLICATION DATA: APPLICATION NUMBER: US 07/529,951
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MEDIUM TYPE: Floppy disk
                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: (617)227-7400
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TITLE OF INVENTION:
                                                                                                                                                                                                                                            APPLICATION NUMBER: US
FILING DATE: May 29, 1
APPLICATION NUMBER: US
FILING DATE: March 17,
                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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STRANDEDNESS:
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                 H: 1328 base pairs nucleic acid
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MOLECULE TYPE:
FEATURE:
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---GGAGAAGCCGTTCTAAGACTCACTAGTAGTGCTGGTGTACTCTCATGCCATCAAGGA 1.16
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Matches:
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                             US-10-010-050A-2_COPY_31_346 (1-316) x US-08-290-448A-58 (1-1328)
                                                                   Query Match:
DB:
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Best Local Similarity:
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US-08-290-448A-58
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GENERAL INFORMATION:
APPLICANT: Rogers
APPLICANT: Klappe
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/290,448A FILING DATE: August 15, 1994
PRIOR APPLICATION DATA:
APPLICATION UMBER: US 07/529,951
FILING DATE: May 29, 1990
APPLICATION NUMBER: US 07/325,365
FILING DATE: March 17, 1989
ATTORNEY/AGENT INFORMATION:
NAME: Amy E. Mandragouras
REGISTRATION NUMBER: 36,207
REGISTRATION NUMBER: 36,207
REGISTRATION NUMBER: 36,207
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: IMTELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Kuo, Mei-chang
TITLE OF INVENTION: Allergenic Proteins From Ragweed and
NUMBER OF ESQUENCES: 93
CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
                                                                                                                                                                                                                                                             FEATURE:
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Klapper, David G.
Rafnar, Thorunn
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Matches:
--ThrGlySerProIleProValMetGluGlyAsp 47
                                                                                                  Conservative: Mismatches:
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RESULT 10 US-08-175-069A-58 (US-08-175-069A-58) ; Sequence 58, Application US/08175069A ; Patent No. 5776761 ; GENERAL INFORMATION: ; APPLICANT: Rogers, Eruce	Qy 308 IleArgAsnLysThrLeu 313 ::: ::: :: Db 1255 TTACGTTCAAGTACTCTA 1272	Qy 288 TrpPheLeuProMetLyBPheProPheIleLy81leThrTyrGluGluIleProLeuPro 3(7 ::: :::	Qy 278	Qy 259 INTLYSG.UPDecebuleuserLeileuGInilePheAspAlaValIleValHisLys 277	239 AsnLysThrLeuGlyLeuAlaIleLysArgPheTyrTyrProPheLysProHisLeuPro	1042	1015 GACTTGCTTGAAAATGGTGCTATTTTT 219 LeuTyrSerGlyGlubroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyAanGluThrsarvalbheGlyBroThrTyrLouGlyBroThrTyrLo	Ov 199 IvsLeualaGlupheGlvalaGlupheIvsAsnTleGluThrasnTvrThrarcTlephe 218	182 Inr	B35 GTCGTTAACAACAACTACGACAGA	148 AsmMerPheAsnGlnMetAlaLysTrpValLysGlnAspAsnGluThrGlyIleTyr	128 724			Qy 68 LeuGlyHisLeuLy8IleMetHisAspAlaIleGlyPheArgSerThrLeuThrGlyLy8 87 :::	QY 48 AspAspIleGluValPheArgLeuGlnAlaProValTrpGluPheLysTyrGlyAspLeu 67	Db 505 TGTCCAGGAGGCATGATTAAGTCCAACGATGGTCCACCAATTTTAAGACAACAAAGTGAT 564
Db 664 TCACACGTG	68 LeuGlyHisLeuLysIleMetHisAspAlaIleGlyPheArgSerThrLeuThrGlyLys	ნ # ნ დ	Solution	-10-010-050A-2_COPY_31_346 (1-316) x US-08-175-069A-58 (1-1328)	Percent Similarity: 29.45% Conservative: 28 Best Local Similarity: 20.86% Mismatches: 113 Query Match: 5.09% Indels: 117 DB: Gans: 15	Length:	; NAME/KEY: CDS ; LOCATION: 11328 US-08-175-069A-58	; TYPE: nucleic acid ; STRANDEDNESS: single ; TOPOLOGY: linear ; MOLECULE TYPE: CDNA	; TELEFAX: (617)227-5941 ; INFORMATION FOR SEQ ID NO: 58: ; SEQUENCE CHARACTERISTICS: ; LENGTH: 1328 base pairs	; REGISTRATION NUMBER: 36,207 ; REFERENCE/DOCKET NUMBER: IMI-018DV ; TELECOMMUNICATION INFORMATION: ; TELEPHONE: (617)227-7400	; APPLICATION NUMBER: US 07/325,365 ; FILING DATE: March 17, 1989 ; ATTORNEY/AGENT INFORMATION: ; NAME: Amy E. Mandragouras	, 1993 7/529,95	PC-DOS/MS-DO Release #1. ATA:	ZIP: 02109-1875 ; COMPUTER READABLE FORM: ; MEDIUM TYPE: Floppy disk ; MEDIUM TYPE: Floppy disk	STREET: 60 State Street CITY: Boston STATE: Massachusetts COUNTRY HSA	OF INVENTION: Allergenic Pr R OF SEQUENCES: 93	; APPLICANT: Klapper, David G. ; APPLICANT: Rafnar, Thorunn ; Applicant: King Mei-phang

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RESULT 11
US-08-461-939B-58
                                                                                                                                                                                                                                                                                                                                                                                            Sequence 58, Application US/08461939B Patent No. 6335019
                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Rogers, Bruce
APPLICANT: Klapper, David
APPLICANT: Rafnar, Thorus
APPLICANT: Kuo, Mei-chand
ZIP: 02109-1875
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOPTWARE: Patentin Release #1.0, Version #1.
                                                                                                                                                                             NUMBER OF SEQUENCES: 93
CORRESPONDENCE ADDRESS.
ADDRESSEE: LAHIVE & COCKFIELD,
STREET: 28 State Street
                                                                                                                                                                                                                                         APPLICANT: Kuo, Mei-chang
TITLE OF INVENTION: Methods For Treating Sensitivity To A
TITLE OF INVENTION: Protein Allergen Using Peptides Which Inloude A T Cell Epitope
                                                                                                                           COUNTRY:
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                                                                                                                                           Massachusetts
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                                                                                                                           USA
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Rafnar, Thorunn
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Best Local Similarity:
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US 07/529,951
FILING DATE: 29-MAY-1990
APPLICATION NUMBER: US 07/325,365
FILING DATE: 17-MAR-1989
ATTORNEY/ACENT INFORMATION:
NAME: Amy E. Mandragouras
REGISTRATION NUMBER: 36,207
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REGERENCE/DOCKET NUMBER: 36,207
REFERENCE/DOCKET NUMBER: INI-018CNDV
TELECOMMUNICATION INFORMATION:
TRIFPHANCE: //Arca-
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APPLICATION NUMBER: US/08/461,939B
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           835 GTCGTTAACAACAACTACGACAGATGGGGAACGTACGCCATCGGTGGTAGCTCGGCCCCA 894
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                                                                                                                       AsnMetPheAsnGlnMetAlaLysTrpValLysGlnAspAsnGluThrGlyIleTyr---
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                                                 -TyrGluThrTrpAsnValLysAlaSerProGluLysGlyAlaGlu 181
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Indels:
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US-08-464-000-58
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
                   APPLICATION NUMBER: US 07/529,951
FILING DATE: 29-MAY-1990
APPLICATION NUMBER: US 07/325,365
FILING DATE: 17-MAR-1989
ATTORNEY/AGENT INFORMATION:
NAME: AMY E. Mandragouras
REGISTRATION NUMBER: 36,207
                                                                                                                                        FILING DATE: 05-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/290,448
FILING DATE: 15-AUG-1994
                                                                                                                                                                                                COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/464,000
FILING DATE: 05-JUN-1995
                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD,
STREET: 60 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Rogers, Bruce
APPLICANT: Klapper, David G.
APPLICANT: Rafnar, Thorunn
APPLICANT: Kuo, Mei-chang
TITLE OF INVENTION: Allergenic Peptides from Ragweed Pollen
NUMBER OF SEQUENCES: 93
                                                                                                                                                                                                                                                                                                                                                                                       ADDALL STREET: V. STREET: Boston Wassar
 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
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IMI-018CN2
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DB:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
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SEQUENCE CHARACTERISTICS:
LENGTH: 1328 base pairs
TYPE: nucleic acid
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TELEPHONE: (617)227-7400
TELEPAX: (617)227-5941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE:
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LOCATION:
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         1042 CTCCCATCCGGGTCTGATCCAGTGCTAACCCCTGAGCAA--
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                                                                                                             LysLeuAlaGluPheGlyAlaGluPheLysAsnIleGluThrAsnTyrThrArgIlePhe 218
                                                                                GACTIGCTIGAAAATGGTGCT-
                                                                                                                                                      TTAGCGAGGACTGGTACTGGCAACGCAGAGTCGATGTCGTGGAACTGGAGAACAGATAAA 1014
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                                          LeuTyrSerGlyGluProThrTyrLeuGlyAsnGluThrSerValPheGlyProThrGly 238
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                                                                                                                                                                                                                                                                                                    GTCGTTAACAACTACGACAGATGGGGAACGTACGCCATCGGTGGTAGCTCGGCCCCA 894
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Matches:
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Indels:
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n: Mismacches: Mismacches: 5.03% Indels: Gaps: 3 Gaps: 3 Gaps: 050A-2_COPY_31_346 (1-316) x US-07-792-600-16 LysArgPheAspPheArgProLysProAspProTyrCys	N-07-792-600-1 Alignment Scores: Pred. No.: 1.37 Score: Bercent Similarity: 36.39% Conservative: Conservative: 56 Conservative: 56	TELEPHONE: (415) 705-8410 TELEFAX: (415) 397-8338 INFORMATION FOR SEQ ID NO: 1: SEQUENCE CHARACTERISTICS: LENGTH: 4440 base pairs TYPE: NUCLEIC ACID STRANDEDNESS: single	PPLICATION NUMBER: US/07/792,600 FILING DATE: 19911115 CLASSIFICATION: 435 ATTORNEY/AGENT INFORMATION: NAME: CARROLL, PETER G. REGISTRATION NUMBER: 32,837 REFERENCE/DOCKET NUMBER: STDU-00097 TELECOMMUNICATION TUPDEMETION:	ZIP: 94104 COMPUTER READABLE PORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:	SEQUENCES: SEQUENCES: DENCE ADDRES EE: Peter G 220 Montgo San Francisc San Francisc California	ESULT 13 S-07-792-600-1 Sequence 1, Application US/07792600 Patent No. 6008045 GENERAL INFORMATION: GENERAL INFORMATION: APPLICANT: COPELAND, WILLIAM C. APPLICANT: WANG, TERESA SF. TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR		hrLys	239 1081
06 LeuProIleArgAsnLysThrLeuSer 314 12 CAAGATTTGAAAGGAGAAACTTTTTCT 1438 21-1 1, Application US/09157021A	Qy 270 PheAspAlaVallleValHisLysGlnPheTyrLeuPheTyrAsnPheGluTyrTrpPhe 289	Qy 231 ThrSerValPheGlyProThrGlyAsnLysThrLeuGlyLeuAlaIleLysArgPhe 249	Db 1166 GAGCGAACG	986 GIGGATTCCAGTCACCTCCCATTGGTAAAAGGGCAGATGAGGAACAAGTATTCCACTTT 183TrpPheAspSerTyrAspCysSerLysPheValLeuArgThrPheAsn 184TrpPheAspSerTyrAspCysSerLysPheValLeuArgThrPheAsn 185	Db 878 GATTCTGGGAAAGGGACCGTTCCTACTTAGGAGTTTTCTCCCGGAT 925 QY 153 MetAlaLysTrpvalLysGlnAspAsnGluThrGlyIleTyrTyrGluThrTrpAsn 171	803 GTG	76 AspAlaIleGlyPheArgSerThrLeuThrGlyLysAsmTyrThrMetGluTrpTyrGlu	Db 623 CCTTCAGGAAAATTGCTTCCCCTGTCTCCAGAAAGGAGCCTCCATTAACTCCTGTTCCT 682 Qy 43 ValMetGluGlyAspAspAspIleGluValPheArgLeu 55 ;; Db 683 CTTAAACGTGCTGAATTTGCTGGCGATGATGTACAGGTACAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAG	Db 563 AAGAAAAGATCCATTGGAGCTTCACCGAATCCTTTCTCTGTGCACACGCCACGGCAGTT 622 Qy 36 ProthrGly

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Best Local Similarity:
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APPLICANT: Wang, Teresa S. F.
ITITLE OF INVENTION: Drug Design Assay
FILE REFERENCE: STDU-03484
CURRENT APPLICATION NUMBER: US/09/157,021A
CURRENT FILING DATE: 1998-09-18
FEARLIER APPLICATION NUMBER: 07/792,600
EARLIER FILING DATE: 1991-11-15
NUMBER OF SEQ ID NOS: 35
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GENERAL INFORMATION:
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TYPE: DNA
ORGANISM: Homo sapiens
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                             1046 TATTGGTTGGATGCTTATGAGGATCAGTACAACCAGCTGTGGGTATTTCTGTTTGGG 1105
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 LysLeuAlaGluPheGlyAlaGlu--
                                                                                                                                                   GTCTCTTGTTGGGACATTGATCAAGAAGGTGATAGCAGTTTCTCAGTGCAAGAAGTTCAA 935
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                                                          ---TrpPheAspSerTyrAsp----
                                                                                        GTGGATTCCAGTCACCTCCCATTGGTAAAAGGGGCAGATGAGGAACAAGTATTCCACTTT 1)45
                                                                                                                  ValLysAlaSerPro-----GluLysGlyAlaGluThr---
                                                                                                                                                                              MetAlaLysTrp---ValLysGlnAspAsnGluThrGlyIleTyrTyrGluThrTrpAsn 171
                                                                                                                                                                                                             GATTCTGGGAAAGGGACCGTG------TCCTACTTAGGAAGTTTTCTCCCGGAT 925
                                                                                                                                                                                                                                          Asn-----GlyThrLeuValGlnValAlaThrIleSerGlyAsnMetPheAsnGln 152
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Indels:
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Best Local Similarity:
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US-09-156-842-1
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ORGANISM: Homo
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GAGTCAGGGCAATGGAGTTTGAAGATGGTGACTTT-
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APPLICANT: Copeland, William C.
APPLICANT: Wang, Teresa S. F.
TITLE OF INVENTION: Drug Screening
FILE REFERENCE: STDU-03485
CURRENT APPLICATION NUMBER: US/09/156,842A
CURRENT FILING DATE: 1998-09-18
EARLIER APPLICATION NUMBER: 07/792,600
EARLIER APPLICATION NUMBER: 07/792,600
EARLIER FILING DATE: 1991-11-15
NUMBER OF SEQ ID NOS: 35
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                    US-10-010-050A-2_COPY_31_346 (1-316) x US-09-156-842-1 (1-4440)
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56 GlnAlaProValTrpGluPheLysTyrGlyAspLeuLeuGlyHisLeuLysIleMetHis 75
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                                                                                                                                                                                                                                                                                                                                          16 LysArgPheAspPheArgProLysProAspProTyrCysGlnAlaLysTyrThrPheCys 35
                                                                                                                    ValMetGluGlyAsp------AspAspIleGluVal-----PheArgLeu
                                                                                                                                                                            CCTTCAGGAAAAATTGCTTCCCCTGTCTCCAGAAAGGAGCCTCCATTAACTCCTGTTCCT 682
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                                                                CTTAAACGTGCTGAATTTGCTGGCGATGATGTACAGGTCGAGAGTACAGAAGAAGAGCAG
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Sear Job	B &	? 문	Ş	ф	δ	В	γQ	ф	Ş	Дb	ζQ.	В	Ş	문	Ş	ф	Q	ф	Ş	В	γΩ	Ф	γQ	DЪ	δ	ర్జ	Ωy
Search completed: April 25, 2004, 05:51:01 Job time : 140.894 secs	Db 1412 CAAGATTTGAAAGGAGAAACTTTTTCT 1438	1352 GTTCCAGAAAAATCTGAAGTACTTGAAGTTAAATACTCGGCTGAAATGCCACAGCTTCCT	290	Db 1304 TTCAAGTCTAAGCCAGTGGAAAAGAACTATGCTTTTGAGATACCTGAT 135	270 PheAspAlaVallleValHisLysGlnPheTyrLeuPheTyrAsnPheGluTyrTrpPhe	1256 TATGAGGAATTTGATGAGAAAATAGCAACAAAATATAAAATTATGAAG	250 TyrTyrProPheLysProHisLeuProThrLysGluPheI	Db 1196 ATGAAAATTGATCTAAATACGGGGAAAGAAACAGGAACTCCAATTTCAATGAAGGATGTT :25	231 ThrSerValPheGlyProThrGlyAsnLysThrLeuGlyLeuAlaIleLysArgPhe	Db 1166 GAGCGAACGCTTTACFTCCTTCCCCGTGAA (19	Qy 211 GluThrAsnTyrThrArgIlePheLeuTyrSerGlyGluProThrTyrLeuGlyAsnGlu 230	Db 1106 AAAGTTTGGATTGAATCAGCCGAGACCCATGTGAGCTGTTGTGTCATGGTGAAAAATATC :116	199 LysLeuAlaGluPheGlyAlaGluPheLysAsnIle	1046 TATTGGTTGGATGCTTATGAGGATCAGTAC	183TrpPheAspSerTyrAspCysSerLysPheVal	Db 986 GTGGATTCCAGTCACCTCCCATTGGTAAAAGGGGCAGATGAGGAACAAGTATTCCACTTT : 104	172 VallysAlaSerProGlulysGlyAl	Db 926 GTCTCTTGTTGGGACATTGATCAAGAAGGTGATAGCAGTTTCTCAGTGCAAGAAGTTCAA 985	153 MetAlaLysTrpValLysGlnAspAsn	Db 878 GATTCTGGGAAAGGGACCGTGTCCTACTTAGGAAGTTTTCTCCCGGAT 925	136 AsnGlyThi	Db 833 TGGGACAAAGAGAGTGAGCCAGCAGAGGAAGTGAAACAAGAGGCG 877	116 TrpCysAsnGlnGlyAlaAlaCysPhePheGluGlyIleAs	803 GTG	96 I	779	Qy 76 AspAlaIleGlyPheArgSerThrLeuThrGlyLysAsnTyrThrMetGluTrpTyrGlu 35
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Result
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-MODEL-frame+ p2n.model -DEV=xlh
-C=/cgn2_1/USFTO_spool/US10010050/runat_22042004_113203_27539/app_query.fasta_1.1372
-Q=/cgn2_1/USFTO_spool/US10010050/runat_22042004_113203_27539/app_query.fasta_1.1372
-DB=N Geneseq_29Jan04 -QFMT=£astap_-SUFFIX=rng_-MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pto -NORM=set -HEARSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US10010050 @CGN 1 1819 @runat 22042004 113203 27539 -NCPU=6 -ICPU=3
-NO_MMAP_LARGEQUERY_NEG_SCORES=0 -WAIT -DSPELOCK=100 -LONGLOG
-USER=US100101050 @CGN 1 TIMEOUT=30 -THREADS=1 -XGAPDP=10 -XGAPDRXT=0.5 -FGAPOP=6
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Maximum
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Maximum Match 100%
Listing first 45 summaries
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Ygapop 10.0,
Fgapop 6.0,
Delop 6.0,
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Match Length
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10:
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1758
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ALIGNMENTS

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RESULT 1
AAX02855
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                                                                       AAX02855 standard; DNA; 1486 BP
Human zsig46
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disease;

Secreted protein; zsig46; human; chromosome 13; thyroid; disease; hypothyroidism; Graves' disease; thyrotoxicosis; thyroid cancer; Hirschsprung's disease; neuronal ceroid-lipofucinosis; Wilson dis Reiger syndrome; immunoassay; detection; anti-idiotypic antibody; 24-JUL-1998; CDS Homo sapiens 04-FEB-1999. WO9905275-A1 therapy; diagnostic; ss. 98WO-US015431. Location/Qualifiers 47. .1087 /product= "zsig46"

(ZYMO) ZYMOGENETICS INC

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02-MAY-2000; 2000JP-00183765
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The invention relates to primers for synthesising full length cDNA clones. 830 cDNA molecules encoding a human protein have been isol and nucleotide sequences of 5'- and 3'-ends of the cDNA molecules

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                                                                                                       This invention describes the isolation of a novel human secreted protein, CC zsig46 encoded by a gene on chromosome 13 which is mainly expressed in CC the thyroid. This product can be used to study secretion of proteins from CC cells and also to treat or prevent deficient expression of zsig46, which CC may be associated with thyroid diseases (e.g. hypothyroidism, Graves' CC disease, thyrotoxicosis, thyroid cancer etc.) or with diseases that CC involve genes in the same region of chromosome 13 (e.g. Hirschsprung's CC disease, neuronal ceroid-lipofucinosis, Wilson disease and Reiger CC syndrome). Antibodies and other binding proteins, are used as immunoassay reagents to detect zsig46 or cells expressing it, e.g. for assessing thyroid function to produce anti-idiotypic antibodies, for affinity purification of zsig46, to screen expression libraries, to neutralise CC zsig46 activity, and to deliver toxins, radioisotopes etc. for CC zsig46 activity, and to deliver toxins, radioisotopes etc. for cc zsig46 activity, and to deliver toxins, radioisotopes etc. for cc zsig46 activity, and to deliver toxins, radioisotopes etc. for cc zsig46 activity, and to deliver toxins, radioisotopes etc. for cc zsig46 activity, and to deliver toxins, radioisotopes etc. for cc zsig46 activity, and to deliver toxins, radioisotopes etc. for cc zsig46 activity, deliver toxins, radioisotopes etc. for cc zsig46 activity and to deliver toxins and zsig46 activity to cell to promote growth, differentiation and proliferation of specific cell cc types, e.g. for treating (extra)thyroid diseases or as additive to cell
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                                                GluGluIleProLeuProIleArgAsnLysThrLeuSerGly 315
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                        GARGARATHCCNYTNCCNATHMGNAAYAARACNYTNWSNGGN
                                                                              TTYTAYAAYTTYGARTAYTGGTTYYTNCCNATGAARTTYCCNTTYATHAARATHACNTAY
                                                                                                 PheTyrAsnPheGluTyrTrpPheLeuProMetLysPheProPheIleLysIleThrTyr
                                                                                                                                 TTYYTNYTNWSNYTNYTNCARATHTTYGAYGCNGTNATHGTNCAYAARCARTTYTAYYTN
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                                                                                                                                                                                                                                                                                                         The invention relates to primers for synthesising full length cDNA clones. 830 cDNA molecules encoding a human protein have been isolated and nucleotide sequences of 5'- and 3'-ends of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cDNA libraries that were synthesised by the oligo-capping method. The primers enable the production of the full length cDNA easily without any special methods. The present sequence was used as the representative sequence from a human clone which was used in homology searches to identify the clone. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in CD-ROM format directly from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-JUL-1999; 99JP-00194486
11-JAN-2000; 2000JP-00118774
02-MAY-2000; 2000JP-00183765
                                                                                                                                                                                                                                                                        Sequence 697
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                                                                                      142 CGGGTCTCGGGCATCCCCTCCCGGCGCCACTGGCCGGTGCCCTGCAAGCGCTTTGACTTC
        41
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                                                                                                1 ArgValSerGlyIleProSerArgArgHisTrpProValProTyrLysArgPheAspPhe
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su A, Sugiyama
IleProValMetGluGlyAspAspAspIleGluValPheArgLeuGlnAlaProValTrp
                                  CGTCCAAAACCTGATCCTTATTGTCAAGCTAAGTATACTTTCTGTCCAACTGGCTCACCT
                                                    ArgProLysProAspProTyrCysGlnAlaLysTyrThrPheCysProThrGlySerPro
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wa T, Nagai
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K, Kojima
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S, Otsuki
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ATCCCAGTTATGGAGGGTGATGATGACACTGAAGTTTTTCGATTACAAGCCCCCAGTATGG

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The invention relates to primers for synthesising full length cDNA clones. 830 cDNA molecules encoding a human protein have been isolated and nucleotide sequences of 5'- and 3'-ends of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched CDNA libraries that were synthesised by the oligo-capping method. The primers enable the production of the full length cDNA easily without any special methods. The present sequence is the nucleotide sequence of the 5'-end of
                                                                                                                                                                                                                                                                                                                           08-JUL-1999;
11-JAN-2000;
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Sugiyama T, Nagai
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                                                                       Probe; human; microarray;
                                                                                                Probe #15029
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03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
04-OCT-2000;
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154 AlaLysTrpValLysGlnAspAsnGluThrGlyIleTyrTyrGluThrTrpAsnValLys

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RESULT 8
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US-10-010-050A-2_COPY_31_346 (1-316)
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26-MAY-2000; 2000US-0207456P.
30-JUN-2000; 2000US-0060840B.
03-AUG-2000; 2000US-00632366.
21-SEP-2000; 2000US-0234687P.
27-SEP-2000; 2000US-02346359P.
04-OCT-2000; 2000GB-00024263.
                                                                                                                                                                                                                                                                                                                     The invention relates to a single exon nucleic acid probe for measuring human gene expression in a sample derived from human foetal liver. The single exon nucleic acid probes may be used for predicting, measuring and displaying gene expression in samples derived from human fetal liver. The present sequence is a single exon nucleic acid probe of the invention. Note: The sequence data for this patent did not form part of the printed Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
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                                                                                                                                                                                                                                                  A; 82
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chen W,
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03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
04-OCT-2000;
                                                                                                                                                                                                                      Penn
                                                                                               gene
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26-MAY-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Probe; microarray;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Probe #19647 used to measure gene expression in human placenta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-0CT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAI50961 standard;
                                                                                                                                                                                                                                                                   (MOLE-)
                                                                                          genome-derived single exon nucleic expression in human placenta.
                                                                                                                                                                                                                   SG,
                                                                                                                                                                      2001-488897/53.
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                                                                                                                                                                                                                                                                 MOLECULAR DYNAMICS INC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTGTGCACAAACAGTTCTATTTGTTTTATAATTTTGAATATTGGTTTTTACCTATGAAA
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                                                                                                                                                                                                                 Hanzel DK,
                                                                                                                                                                                                                                                                                                           ; 2000US-0180312P.
2000US-0207456P.
; 2000US-0060840B.
; 2000US-00632366.
; 2000US-0234687P.
; 2000US-0236359P.
; 2000US-0236359P.
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                                                                                                                                                                                                                 Chen W,
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                                                                                                                                                                                                                   Rank
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                                                                                                                      acid
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                                                                                                                      for
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score:
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                                                                                                                                                                        Human; gene expression; heart; microarray; vascular system; cardiovascular disease; hypertension; cardiac arrhythmia; congenital heart disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                      ABA37272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence is one such probe. The probes are useful for producing a microarray for predicting, measuring and displaying expression in samples derived from human placenta. The probes ar for antenatal diagnosis of human genetic disorders
                                                                            WO200157274-A2
                                                                                                                                                                                                                                                                         Probe #15738
                                                                                                                                                                                                                                                                                                                       23-JAN-2002
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26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            measuring human gene expression in a sample derived from human heart. The present sequence is one such probe. The probes may be used for predicting, measuring and displaying gene expression in samples derived from the human heart via microarrays. By measuring gene expression, the probes are useful for predicting, diagnosing, grading, staging, probes are useful for predicting, diagnosing, grading, staging, monitoring and prognosing diseases of the human heart and vascular system e.g. cardiovascular disease. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to single exon nucleic acid probes for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim
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                                                                                                                                                                                                                                                                                          174 AlaSerProGluLysGlyAlaGluThrTrpPheAspSerTyrAspCysSerLysPheVal
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              IleValHisLysGlnPheTyrLeuPheTyrAsnPheGluTyrTrpPheLeuProMetLys
                                                    AAACCACATTTGCCAACTAAAGAATTTCTGTTGAGTCTCTTGCAAATTTTTGATGCAGTG
                                                                      Ly8ProHisLeuProThrLy8GluPheLeuLeuSerLeuLeuGlnIlePheAspAlaVal
                                                                                                                            PheGlyProThrGlyAsnLysThrLeuGlyLeuAlaIleLysArgPheTyrTyrProPhe
                                                                                                                                                                                     TyrThrArgIlePheLeuTyrSerGlyGluProThrTyrLeuGlyAsnGluThrSerVal
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ATTGTGCACAAACAGTTCTATTTGTTTTATAATTTTGAATATTGGTTTTTACCTATGAAA
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2000US-0207456P.
2000US-0060840B.
; 2000US-00632366.
; 2000US-0234687P.
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26-MAY-2000; 2000US-0207456P.
30-JUN-2000; 2000US-00608408.
03-AUG-2000; 2000US-00632366.
21-SBP-2000; 2000US-0234687P.
27-SBP-2000; 2000US-02346879.
04-OCT-2000; 2000GB-00024263.
                                                                                                                                                                                              Sequence 494
                                                                                                                                                                                                                  probes which are derived from genomic sequences expressed in the human bone marrow. They can be used to measure gene expression in bone marrow samples, which may enable the improved diagnosis and treatment of cancers such as lymphoma, leukaemia and myeloma. The present sequence is one of the invention
                                                                                                                                                                                                                                                                                                                        gene
                                                                                                                                                                                                                                                                                               Example 4; SEQ ID NO 19549; 658pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                 Human genome-derived single exon nucleic acid probes useful for analyzing
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21-SEP-2000; 2000US-0234687P.
27-SEP-2000; 2000US-0236359P.
04-OCT-2000; 2000GB-00024263.
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                                                                                                                    Human, single exon nucleic acid probe; liver; cirrhosis; hyperlipoproteinaemia; hyperlipidaemia; hypercholesterol coronary heart disease; ss.
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30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
04-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         measuring human gene expression in a sample derived from human adult liver, comprising one of 13109 defined nucleotide sequences given in the specification (or complements) fragments). The probe hybridises at high stringency to a nucleic acid molecule expressed in the human adult liver. (1) may be used for predicting, measuring and displaying gene expression in samples derived from human adult liver. The genes identified may be involved in genetic liver diseases such as cirrhosis, hyperlipoproteinaemia, hyperlipidaemia and hypercholesterolaemia which is associated with coronary heart disease. ABS25011-ABS51005 represent human liver single exon nucleic acid probes of the invention. Note: The sequence information for this patent does not appear in the printed sequence information for this patent does not appear in the printed sequence information for this patent does not appear in the printed sequence.
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                                                                                     PheGlyProThrGlyAsnLysThrLeuGlyLeuAlaIleLysArgPheTyrTyrProPhe
 AAACCACATTTGCCAACTAAAGAATTTCTGTTGAGTCTCTTGCAAATTTTTGATGCAGTG
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The invention relates to a spatially-addressable set of single exon nucleic acid probes for measuring gene expression in a sample derived from human lung comprising single exon nucleic acid probes having one of 12614 nucleic acid sequences mentioned in the specification, or their complements or the 12387 open reading frames derived from the 12614 probes. Also included are a microarray comprising the novel set of probes; the novel set of probes which hybridise at high stringency to a nucleic acid expressed in the human lung; measuring gene expression in a sample derived from human lung, comprising (a) contacting the array with a collection of detectably labeled nucleic acids derived from human lung maxNA, and (b) measuring the label detectably bound to each probe of the array; identifying exons in a enkaryotic genome, comprising (a) algorithmically predicting at least one confirm genomic sequences of the array and (b) producting at least one confirm genomic sequences of the sequ

eukaryote; and

9

specific hybridisation

Spatially-addressable set of single exon nucleic acid probes, used measure gene expression in human lung samples.

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2002-114183/15

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ID NO 19228; 634pp; English.

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RESULT 14

ABS19237

ID ABS19

XX ABS19

AC Chron

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30-JUN-2000;
03-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chronic obstructive pulmonary disease; interstitial lung disease; familial idiopathic pulmonary fibrosis; neurofibromatosis; tuberous sclerosis; Gaucher's disease; Niemann-Pick disease; Hermansky-Pudlak syndrome; sarcoidosis; Pulmonary histiocytosis; lymphangioletiomyomtosis; Karagener syndrome; pulmonary alveolar proteinosis; fibrocystic pulmonary dysplasia; primary ciliary dyskinesis; pulmonary hypertension;
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AsnGluThrGlyIleTyrTyrGluThrTrpAsnValLysAlaSerProGluLysGlyAla 180

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                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New polynucleotides encoding human secreted
human blood, kidney, foetal lung, placenta,
pituitary, retina and colon cDNA libraries.
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Search completed: April 24, 2004, 23:26:28 Job time : 589.283 secs	ACTCTTGGTTTAGCCCATAAAAAGATTTTATTACCCCTTC 497	AGTIGGAGAACCIACTIAICTIGGAAAAIGAAACAICIGIIIIIIGGGCCAACAAGAACAAG 436 ThrieuGlyieuAlaileiysArqPheTyrFroPhe 253	SerGlyGluProThrTyrLeuGlyAsnGluThrSerValPheGlyProThrGlyAsnLys 240	GCTGAATTTGGAGCAGAGTTCAAGAACATAGAAACCAACTATACAAGAATATTTCTTTAC 398	201 AlaGluPheGlyAlaGluPheLysAsnIleGluThrAsnTyrThrArgllePheLeuTyr 220	GAGACATGGTTTGATTCCTACGACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAGTTG 338	181 GluThrTrpPheAspSerTyrAspCysSerLysPheValLeuArgThrPheAsnLysLeu 200	

GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

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Command line parameters:

-MODEL=frame+ p2n.model -DEV=xlh
-Q=/cg12 1/USPTO spool/US10010050/runat 22042004 113204 27556/app query.fasta_1.1372
-Q=/cg172 1/USPTO spool/US10010050/runat 22042004 113204 27556/app query.fasta_1.1372
-DB=EST -Q=FMT=fastap -SUFFIX=rst -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS-bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DCCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINIEN=0 -MAXLEN=2000000000
-USER-US10010050 @GGN 1 1 6283 @runat 22042004 113204 27556 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQÜERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-NORM=EXT=0 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPOEXT=0.5 -FGAPOP=6
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SUMMARIES

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ALIGNMENTS

ORGANISM REFERENCE	SOURCE	VERSION KEYWORDS	ACCESSION	DEFINITION	AU280382	RESULT 1
Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 565)	Homo sapiens (human)	AU280382.1 GI:28299609 EST.	sequence. AU280382	NIESEZ Homo sapiens cDNA clone NIESE20017	AMDRO182 S65 bm mRNA linear EST 31-JUL-2003	

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SOURCE
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HRI human cDNA Project, Sugiyama, T.; Wakamatsu, A.; Irie, R.;
Umczawa, A.; Fukuma, M.; Kusakari, S.; Hata, J.; Ishii, S.; Yamamoto, J.;
Isono, Y.; Saito, K.; Nakamura, Y.; Masuho, Y.; Nagai, K.; Isogai, T.
HRI human cDNA project; cDNA library construction & 5'-end one
pass sequencing: Helix Research Institute.
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Genome Research Center
Korea Research Institute of
52 Eceun-dong Yuseong-gu,
Tel: +82-42-860-4470
Fax: +82-42-860-4409
                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 607)

Kim,N.S., Hahn,Y., Oh,J.H., Lee,J.Y., Ahn,H.Y., Chu,M.Y., Kim,M.R., Oh,K.J., Cheong,J.E., Sohn,H.Y., Kim,J.M., Park,H.S., Kim,S. and
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Isogai,T., Hata,J., Tomoya,Y. and Umezawa,A.
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/clone lib="N1ESE2"
/note="Vector: pME18SFL3"
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/mol_type="mRNA"
/db_xref="taxon:9606"
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                                                              Institute of Bioscience & Biotechnology
Yuseong-gu, Daejeon 305-333, South Korea
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BQ417448
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ417448
623 bp mRNA linear EST 15-JUL-200: ik38b05.yl HR85 islet Homo sapiens cDNA clone IMAGE:5783001 5' similar to SW:CLN5_HUMAN 075503 CLN5 PROTEIN. [1] ;, mRNA sequence.
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Plate: 67 row: D column: 07
                                                                                    Melton,D., Brown,J., Kenty,G., Permutt,A., Lee,C., Kaestner,K., Lemishka,I., Scearce,M., Brestelli,J., Gradwohl,G., Clifton,S., Hillier,L., Martia,M., Pape,D., Wylle,T., Martin,J., Blistain,A., Schmitt,A., Theising,B., Ritter,E., Ronko,I., Bennett,J., Cardenas,M., Gibbons,M., McCann,R., Cole,R., Tsagareishvili,R., Williams,T., Jackson,Y. and Bowers,Y.
Williams,T., Jackson,Y. and Bowers,Y.
               Unpublished (2000)
Other ESTs: ik38b05.x1
Contact: Douglas Melton, Klaus H.
                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
Endocrine Pancreas Consortium
                                                                                                                                                                                                                                                                                                     Mammalia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  library."
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/cell_line="XMS-5"
/lab_host="Top10F'"
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mol_type="mRNA"
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_line="KMS-5"
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                          & Hiroshi Inoue
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BG820113
LOCUS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21 LeuTrpLeuAlaValValProGlyTrpSer 30
Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: David N. Louis, M.D.

cDNA Library Preparation: Life Technologies, Inc.

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information.
                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostom.; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 676)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                    BG820113 676 bp mRNA linear EST 22-MAY-2
                                                                                                                                                                                                                                                                                                               Homo sapiens
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BG820113
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Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seq primer: -40RP from Gibco
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /notce="Organ: Pancreas; Vector: pBluescript SK(-); Sits 1:
Not1; Site 2: XhoI; cDNA made by oligo-dT priming.
Size-selected on agarose gel. Average insert size ~lkb. 5'
XhoI site was destroyed after directional cloning.
Amplified once. Contact information: Hiroshi Inoue, MD,
Metabollsm Div. (Alan Permutt Lab); Washington University
School of Medicine, Box 8127, 660 South Euclid Ave., S:.
Louis, MO 63110, E-mail: hinoue@imgate.wustl.edu, Tel:
314-362-1916, Fax: 314-747-2692."
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/mol_type="mRNA"
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'clone_lib="HR85
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1 (Dases 1 to 787)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: Incyte Genomics, Inc. DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information found through the I.M.A.G.E. Consortium/LLNL at: http://insge.llnl.gov Plate: LiAM11253 row: n column: 06
                                                                                                                                                              High quality sequence stop: 762.
                                                                                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA sequence.
/organism="Homo sapiens"
/mol_type="mRNA"
/db xref="taxon:9606"
/clone="IMAGE:5105093"
/tissue_type="cervical carcinoma cell line"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /lab_host="DH10B (T1 phage-resistant)"
/clone lib="NCI CGAP Brn67"
/note="Organ: brain, Vector: pCMV-SPORT6; Site_1: Not Site_2: Sall; Cloned unidirectionally. Primer: Oligo Average insert size 2.3 kb. Constructed by Life_
                                                                                                                                           location/Qualifiers
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'db_xref="taxon:9606"
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RESULT 6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tissue Procurement: Dr. James R. Lupski
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

1. (bases 1 to 847)
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AGENCOURT 8103813 Lupski sympathetic trunk Homo sapiens cDNA clone
IMAGE:6191057 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLAN13590 row: n column: 18
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National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Robert Strausberg, Ph.D.
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Location/Qualifiers
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/note="Organ: cervix; Vector: pCMV-SPORT6; Site 1: Not1; Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.4 kb. Library prepared by Life Technologies."
/clone lib="Lupski sympathetic trunk"
/note="Vector: pCMV-SPORT6 (Life Technologies); Site_1:
NotI; Site_2: SalI; cDNA made by oligo-dT priming.
Directionally cloned using the following adaptors:
5'-TCGACCCACGGTCCG-3' and
5'-GACTAGTTCTAGATCGCGAGCCGCCCT(15)-3'. Size selected >
1' kb for average insert length 1.9 kb. This is a primary
library, non-amplified. Library constructed by Life
Technologies and donated by J. Lupski, M.D./Ph.D. (Baylor College of Medicine); available through Life
                                                                                                                                                                                                                      tissue_type="sympathetic trunk"
/dev_stage="adult, 16 yr"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                /sex="male"
                                                                                                                                                                                                                                                                                                                db_xref="taxon:9606"
/clone="IMAGE:6191057"
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US-10-010-050A-2_COPY_1_30 (1-30) x BI090566 (1-869)
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1 (bases 1 to 869)

NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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Location/Qualifiers
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                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
mol type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4996891"
/cell line="MGC36"
/lab_host="DH10B"
                                                                                                                                                                                                    /clone_lib="NIH_MGC_10"
/note="Organ: cervix; Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT
Average insert size 1.5 kb. Library prepared by Life
Technologies."
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MetArgArgGlyAlaGlyAlaAlaArgGlyArgAlaSerTrpCysTrpAlaLeuAlaLeu

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238.f For
more information about this cluster, see
                            BF982158
602308976F1 NIH_MGC_88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cgi-bin/cluster.cgi?seq=CSODB009AB01QP1&cluster=7238.f. Contact Feng Liang Email : fliang@lifetech.com URL : http://fulllength.invitrogen.com/ InVitroGen Corporation 1600 Faraday Avenue Genoscope sequence ID : CSODB009AB01QP1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/mol_type="mRNA"
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Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Eutelec Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1201)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
On Feb 15, 2001 this sequence version replaced gi:12879620. Contact: Genoscope
                                                                                                                                                                                                                                                                                                                        AL546472
AL546472 Homo sapiens PLACENTA COT 25-NORMALIZED Homo sapiens cDNA clone CSODIO30YJO1 5-PRIME, mRNA sequence.
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Tissue Procurement: ATCC
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National Institutes of Health, Mammalian
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
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/clone libe"NIH_MGC_B8"
/clone libe"NIH_MGC_B8"
/note="Organ: small intestine; Vector: pCMV-SPORT6;
Site 1: NotI; Site 2: Sall; Cloned unidirectionally;
oligo-dT primed. Average insert size 1.767 kb. Library
enriched for full-length clones and constructed by Life
Technologies. Note: this is a NIH_MGC Library."
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                                                                             Email: cgapbs r@mail.nih.gov
Tissue Procurement: Dr. James R. Lupski
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLAM1577 row: g column: 04
               High quality sequence start: 7
High quality sequence stop: 277.
Location/Qualifiers
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National Institutes of Health, Mammalian
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AGENCOURT_8482480 Lupski_dorsal_root_ganglion Homo sapiens cDNA
clone IMAGE:6185883 5', mRNA sequence.
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Feng Liang Email: fliang@lifetech.com URL:
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID: CSODIO30CE01QP1.
Location/Qualifiers
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BP 191 91006 EVRY cedex - France
Email: seqref@genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238.f For
ince information about this cluster, see
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and Ecof. V
sites of the pCMVSPORT 6 vector. Library was normalized."
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                                                                                                                                            Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Kristi A. Egland, Ira Pastan
cDNA Library Preparation: Invitrogen Corp
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLNM14279 row: j column: 21
High quality sequence stop: 637.
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(bases 1 to 924)

NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
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CA488543
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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/clone lib="Lupski dorsal root ganglion"
/note="Vector: pCMV-SPORT6 (Life Technologies); Site_1:
Not1; Site_2: Sal1; cDNA made by oligo-dT priming.
Directionally cloned using the following adaptors:
5'-TCGACCCACGCGTCCG-3' and
5'-GACTAGTTCTAGATCGCGAGCCGCCCT(15)-3'. Size selected >
1'kb for average insert length 1.7 kb. This is a primary
library, non-amplified. Library constructed by Life
Technologies and domated by J. Lupski, M.D./Ph.D. (Baylor College of Medicine) and is available through Life
                  /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6720309"
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/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                               organism="Homo sapiens"
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/dev_stage="adult, 36 yr"
/lab_host="DH10B"
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line="ZR-75-1, MCF7, SK-BR-3, MDA-MB-231,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238.f For
more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MetArgArgGlyAlaGlyAlaAlaArgGlyArgAlaSerTrpCyeTrpAlaLeuAlaLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Genoscope
Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 1077)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDMA libraries and normalization
Unpublished (2001)
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                                                                                                                                                                                                                                                                                                                                                                                                                                        http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq=CSODL004CH02QPl&cluster=7238.f.
Feng Liang Email : fliang@llfetech.com URL :
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Location/Qualifiers
primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and Ecor vsites of the pCMVSPORT 6 vector. Library was normalized
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/note="Vector: pCMV-SPORT6; Site_1: EcoRV; Site_2: Not :;
Subtracted with brain, liver, lung, kidney and muscle.
Directionally cloned. Priming method: oligo-dT. Average insert size: 1800 bp. Library amplification: 26,000 fold.
Kristi A. Egland, James J. Vincent, Robert Strausberg, Bungkook Lee & Irra Pastan: Discovery of new breast cancer genes encoding membrane and secreted proteins.
Manuscript submitted."
                                                                                    /note="1st strand cDNA was primed with a NotI-oligo(dT)
                                                                                                                                       /clone="CSODLO04YP03"
/cell type="B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED"
/cell line="RAMOS CELL LINE"
/clone_lib="Homo sapiens B CELLS (RAMOS CELL LINE) COT
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/mol_type="mRNA"
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/lab_host="EMDH10B"
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1 (bases 1 to 589)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: ATCC/DCTD/DTP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA Library Preparation: CLONETECH Laboratories, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MetargargGlyalaGlyala-AlaargGlyargalaSerTrpCysTrpalaLeualaLe 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    quality sequence stop: 586.
Location/Qualifiers
                                                                                                                       /tissue_type="melanotic melanoma, high MDR"
/lab host="DH10B (T1 phage-resistant)"
/clone lib="NIH MGC 62"
/clone lib="NIH MGC 62"
/note="Organ: skin; Vector: pDNR-LIB (Clontech); Site_1:
/note="Torgan: skin; Vector: pDNR-LIB (Clontech); Site_1:
/n
                       contained inserts by PCR. This library was enriched for full-length clones and was constructed by Clontech Laboratories (Palo Alto, CA)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone="IMAGE: 4305501"
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AUTHORS
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VERSION
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CA397574
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CA397574
CA397574.1 GI:24735005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CA397574 555 bp mRNA linear EST 06-NOV-2002 cs92h10.y2 Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified): cs Homo sapiens cDNA clone cs92h10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Wistow,G., Bernstein,S.L., Wyatt,M.K., Farris,R.N., Behal,A.,
Touchman,J.W., Bouffard,G., Smith,D. and Peterson,K.
Expressed sequence tag analysis of human RPE/choroid for the
NEIBank Project: Over 6000 non-redundant transcripts, novel genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 555)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: graeme@helix.nih.gov
Plate: 92 row: h column: 10
Seq primer: M13RP1_reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and splice variants Mol. Vis. 8 (4), 20
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Fax: 301 496 0078
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                                                                                   /Glone lib="Human Retinal pigment epithelium/choroid cINA (Un-normalized, unamplified): cgs"
/note="Organ: Eye; Vector: pcCMVSPORT6; Two different dcnor eyes (75-80 years old) yielded approximately 600 mg of dissected RPE/choroid tissue. This in turn yielded 34C ug of total RNA and 7 ug of mRNA. A directionally cloned cDNA library in the pcMVSPORT6 vector was constructed at Life Technologies (Rockville, MD; now part of Invitrogen Corp), essentially following the protocols of the SuperScript Plasmid System (Invitrogen Corp. chttp://www.invitrogen.com/>). The library code designation was cs. For this library, cDNA inserts were cloned into the NotI/Mull sites of the vector. EST analysis was performed on the unamplified library at the NIH Intramural Sequencing Center (NISC)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                          /tissue_type="RPE/choroid"
/dev_stage="Adult"
/lab_host="EMDH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="cs92h10"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Homo sapiens"
/mol_type="mRNA"
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-MODEL=frame+ p2n.model -DEV=xlh
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-Q-/cgn2_1/USPTO_spool/US10010050/runat_22042004_113205_27584/app_query.fasta_1.1372
-DB=Published_Applications_NA -QFWT=fastap -SUFFIX=rnpb -MINMATCH=0.1
-LOOPEXT=0 -USTEN=0 -THR_SCORE=pct -THR_MAX=100
-THR_MIN-0 -ALIGN=15 -MODE=LOCAL_OUTFWT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0
-MAXIEN=200000000 -USER-US10010050_@CGN 1_1776_@runat_22042004_113205_27584
-NCPU=6 -ICPU=3 -NO_MMAp -LARGEQUERY -NEG_SCORES=0 -WALT -DSPBLOCK=100
-LONGLOG -DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5
-FGAPOP=6 -FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELDP=6 -DELEXT=7
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
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Copyright (c) 1993 - 2004 Compugen Ltd.
/ Cgn2_6/ptodata/2/pubpna/US08_NEW_PUB.seq:*
/ Cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*
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		equence 1, Ar	Sequence 299, App Sequence 2394, Ap	Sequence 65	70				10	Sequence 1, A	e 4987	ze 1708,	(B) (C)	equence 31678,	equence 181138 equence 181139	quence 18:	ומי ובי	e 14,	equence 2057	equence 2067	quenc	e 2189	quence 11275,	Sequence 12900, Ap	equence 151	Sequence 241716,	Sequence 13,	ce 26, e 13,	26,	Sequence 1, Appli Sequence 1, Appli

US-09-122-383-1

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US-10-010-050A-1
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Sequence 26, Application US/10653595
Publication No. US20040048304A1
GENERAL INFORMATION:
APPLICANT: Ruben et. al.
TITLE OF INVENTION: 95 Human secreted proteins
FILE REFERENCE: PZ027P1C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Sheppard, Paul O.
APPLICANT: Gilbertson, Debra G.
TITLE OF INVENTION: SECRETED PROTEINS ENCODED BY HUMAN
TITLE OF INVENTION: CHROMOSOME 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 1
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CURRENT APPLICATION NUMBER: US/10/010,050A
CURRENT FILING DATE: 2002-03-26
PRIOR APPLICATION NUMBER: US 09/122,383
PRIOR FILING DATE: 1998-07-24
PRIOR APPLICATION NUMBER: US 60/053,613
PRIOR APPLICATION NUMBER: US 60/053,613
PRIOR FILING DATE: 1997-07-24
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NAME/KEY: CDS
LOCATION: (47)...(1084)
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Query Match:
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SOFTWARE: Patem
; SEQ ID NO 26
FORTH: 1751
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PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/080,314
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/080,312
PRIOR FILING DATE: 1998-04-01
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/078,578
PRIOR FILING DATE: 1998-03-19
PRIOR FILING DATE: 1998-03-19
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PRIOR FILING DATE: 1999-03-18
PRIOR APPLICATION NUMBER: 60/078,566
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,576
PRIOR FILING DATE: 1998-03-19
PRIOR FILING DATE: 1998-03-19
PRIOR PRIOR APPLICATION NUMBER: 60/078,573
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,574
PRIOR APPLICATION NUMBER: 60/078,574
PRIOR FILING DATE: 1998-03-19
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NAME/KEY: SITE
LOCATION: (1741)
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CURRENT FILING DATE: 2003-09-03
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LOCATION: (1735)
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OTHER INFORMATION:
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OTHER INFORMATION: n equals a,t,g, or
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NAME/KEY: SITE
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ORGANISM: Homo sapiens
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US-09-397-945-26; Sequence 26, Application US/09397945; Publication No. US20030065139A1
US-10-010-050A-2_COPY_1_30 (1-30) x US-09-397-945-26 (1-1751)
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PRIOR FILING DATE: 1999-03-18
PRIOR PPLICATION NUMBER: 60/078,566
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,576
PRIOR FILING DATE: 1998-03-19
                                                          Query Match:
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SOFTWARE: PatentIn Ver. 2
SEQ ID NO 26
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CURRENT FILING DATE: 1999-09-17
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PRIOR APPLICATION NUMBER: 60/078,577
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PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/080,312
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PRIOR FILING DATE: 1998-03-19
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Homo sapiens
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LOCATION: (152)
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LOCATION: (1741)
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LOCATION: (1735)
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LOCATION: (1689)
OTHER INFORMATION: n
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OTHER INFORMATION: n
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APPLICATION NUMBER: 60/080,314
FILING DATE: 1998-04-01
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TITLE OF INVENTION: SECRETED PROTEINS ENCODED BY
TITLE OF INVENTION: CHROMOSOME 13
FILE REFERENCE: 97-38
CURRENT APPLICATION NUMBER: US/09/122,383A
CURRENT FILING DATE: 1998-07-24
FEARLIER APPLICATION NUMBER: 60/053,613
EARLIER APPLICATION NUMBER: 60/053,613
EARLIER FILING DATE: 1997-07-24
NUMBER: OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 13
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; LOCATION: (1)...(1038)
; OTHER INFORMATION: n is any nucleotide
US-09-122-383-13
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                                                                                                                                                                      Sequence 13, Application US/10010050A
Publication No. US20020173624A1
GENERAL INFORMATION:
APPLICANT: Sheppard, Paul O.
APPLICANT: Gilbertson, Debra G.
APPLICANT: GILDERTSON, DEBRA G.
TITLE OF INVENTION: CCHROMOSOME 13
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                                   CURRENT APPLICATION NUMBER: US/10/010,050A CURRENT FILING DATE: 2002-03-26 PRIOR APPLICATION NUMBER: US 09/122,383 PRIOR FILING DATE: 1998-07-24 PRIOR APPLICATION NUMBER: US 60/053,613 PRIOR FILING DATE: 1997-07-24
SOFTWARE: FastSEQ for Windows Version
                    NUMBER OF SEQ ID NOS: 19
                                                                                                                                                              FILE REFERENCE: 97-38C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Degenerate nucleotide sequence encoding zsig46 OTHER INFORMATION: polypeptide of SEQ ID NO:2
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Matches:
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US-10-010-050A-2_COPY_1_30 (1-30) x US-10-027-632-241716 (1-580)
                                                              Best Local Similarity:
Query Match:
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US-10-027-632-241716
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US-10-027-632-241716
                                                                                                 Percent Similarity:
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Best Local Similarity:
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Publication No. US20020198371A1
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NUMBER OF SEQ ID NOS: 325720
SOFTWARE: FastSEQ for Windows Version 4.0
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CURRENT APPLICATION NUMBER: US/10/027,632
CURRENT FILING DATE: 2002-04-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Polymorphisms in the Human Genome
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PRIOR FILING DATE: 2000-04-20
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR EILING DATE: 2000-03-29
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PRIOR FILING DATE: 2000-07-12
PRIOR APPLICATION NUMBER: US 60/198,676
                                                                                                                                                                                                                          LENGTH: 580
TYPE: DNA
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LOCATION: (1)...(1038)
OTHER INFORMATION: n = A,T,C
                                                                                                                                     No.:
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ORGANISM: Artificial Sequence
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APPLICATION NUMBER: US 60/167,363
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Indels:
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Percent Similarity:
Best Local Similarity:
Query Match:
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CURRENT FILING DATE: 2002-04-30
PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR FILING DATE: 2000-07-12
PRIOR APPLICATION NUMBER: US 60/198,676
PRIOR FILING DATE: 2000-04-20
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR PILING DATE: 2000-02-24
PRIOR FILING DATE: 2000-02-24
                                                                                                                                                                        Sequence 15190, Application US/10282122A Publication No. US20040029129A1 GENERAL INFORMATION:
                                           APPLICANT:
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                                                                              APPLICANT: Wang, Liangsu
APPLICANT: Zamudio, Carlos
APPLICANT: Malone, Cheryl
APPLICANT: Haselbeck, Robert
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  APPLICANT
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TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Polymorphisms in the Human Genome
FILE REFERENCE: 108827.129
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             Ohlsen, Kari
Zyskind, Judith
Wall, Daniel
Trawick, John
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Matches:
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FILE OF INVENTION: Identification of Essential Genes in Microorganisms;
FILE REFERENCE: ELITRA.034A
CURRENT APPLICATION NUMBER: US/10/282,122A
CURRENT FILING DATE: 2003-02-20
PRIOR APPLICATION NUMBER: 60/191,078
PRIOR FILING DATE: 2000-03-21
PRIOR APPLICATION NUMBER: 60/206,848
PRIOR APPLICATION NUMBER: 60/207,727
PRIOR FILING DATE: 2000-05-23
PRIOR FILING DATE: 2000-05-26
PRIOR FILING DATE: 2000-05-26
PRIOR FILING DATE: 2000-09-06
PRIOR FILING DATE: 2000-09-06
PRIOR APPLICATION NUMBER: 60/230,335
PRIOR APPLICATION NUMBER: 60/230,347
PRIOR FILING DATE: 2000-09-06
PRIOR FILING DATE: 2000-10-23
PRIOR APPLICATION NUMBER: 60/242,578
PRIOR FILING DATE: 2000-10-23
PRIOR FILING DATE: 2000-11-27
PRIOR APPLICATION NUMBER: 60/253,625
PRIOR APPLICATION NUMBER: 60/257,931
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nuery Match:
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SEQ ID NO 12900
LENGTH: 256
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APPLICANT: Warren, Wesley C.
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LENGTH: 1071
                                                  APPLICANT: Tao, Nengbing
APPLICANT: Byatt, John C.
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND
TITLE OF INVENTION: MUSCLE AND FAT DEPOSITION
FILE REFERENCE: 16511.006/37-21(10298)C
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT FILLING DATE: 2001-09-24
NUMBER OF SEQ ID NOS: 15112
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FILING DATE: 2001-02-09
APPLICATION NUMBER: 60/269,308
FILING DATE: 2001-02-16
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US-09-960-352-11275/c
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Query Match:
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Sequence 11275, Application US/09960352
Patent No. US20020137139A1
GENERAL INFORMATION:
APPLICANT: Warren, Wesley C.
APPLICANT: Tao, Nengbing
APPLICANT: Byatt, John C.
APPLICANT: Byatt, John C.
APPLICANT: Matchialagan, Nagappan
TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND
TITLE OF INVENTION: MUSCLE AND FAT DEPOSITION
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APPLICANT: Tao, Nengbing
APPLICANT: Byatt, John C.
APPLICANT: Mathialagan, Nagappan
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OTHER INFORMATION: Clone ID:
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OTHER INFORMATION: Clone ID: 55-LIB3058-030-Q1-K1-F4
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; ORGANISM: Bos taurus
; OTHER INFORMATION: Clone ID: 48-LIB34-036-Q1-E1-D8
US-09-960-352-11275
                                    RESULT 14
US-09-814-353-21894/c
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Best Local Similarity:
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CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT FILING DATE: 2001-09-24
NUMBER OF SEQ ID NOS: 15112
SEQ ID NO 11275
LENGTH: 404
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Sequence 21894, Application US/09814353
Publication No. US20030165831A1
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APPLICANT: Byatt, John C.
APPLICANT: Byatt, John C.
APPLICANT: Mathalagan, Nagappan
TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION TITLE OF INVENTION: NUSCLE AND FAI DEPOSITION
FILE REFERENCE: 16511,006/37-21(10298)C
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT FILING DATE: 2001-09-24
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ORGANISM: Bos taurus
OTHER INFORMATION: Clone ID: 60-LIB34-005-Q1-E1-G8
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PRIOR FILING DATE: 2000-03-21
PRIOR APPLICATION NUMBER: US 60/207,124
PRIOR FILING DATE: 2000-05-25
PRIOR PRILING DATE: 2000-05-25
PRIOR PRILING DATE: 2000-06-15
PRIOR PILING DATE: 2000-07-07
PRIOR PILING DATE: 2000-07-07
PRIOR PILING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR APPLICATION NUMBER: US 60/220,661
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR PILING DATE: 2000-12-21
PRIOR FILING DATE: 2000-12-21
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LENGTH: 4853
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                                                                                                                                                                                                                                                                                                                                                                           Sequence 15, Application US/10395740 Publication No. US20030215852A1
APPLICANT: Wood, Andrew
APPLICANT: Gulukota, Kamalakar
TITLE OF INVENTION: NOVEL PANCORTIN-PABLO PROTEIN INTERACTIONS AND METHODS OF 1
TITLE OF INVENTION: THEREOF
FILE REFERENCE: AMIGO375PCT
CURRENT APPLICATION NUMBER: US/10/395,740
CURRENT FILING DATE: 2003-03-24
PRIOR APPLICATION NUMBER: US 60/369,244
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CURRENT APPLICATION NUMBER: US/09/814,353
CURRENT FILING DATE: 2001-03-21
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TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND METHODS
TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT, PREVENTION, AND
                                                                                                                                                                                                                                                                                                APPLICANT: WYETH APPLICANT: Mark
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NUMBER OF SEQ ID NOS: 15

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SOFTWARE: PatentIn version 3.2

SEQ ID NO 15

LENGTH: 44442

TYPE: DNA

ORGANISM: Genomic DNA

IS-10-395-740-15

Lignment Scores:
Fred. No.:
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US-09-252-991A-9484
US-09-252-991A-7647
US-09-252-991A-9378
US-09-252-991A-9459
US-09-252-991A-13835
US-09-252-991A-13619
US-09-252-991A-13619
US-08-601-184-4
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Best Local Similarity:
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US-09-252-991A-9484
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TITLE OF INVENTION: NUCLERIC ACID AND AMINO ACID SEQUENCES RELATING TO TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS FILE REFERENCE: 107196-136

CURRENT APPLICATION NUMBER: US/09/252,991A

CURRENT FILING DATE: 1999-02-18

PRIOR APPLICATION NUMBER: US 60/074,788

PRIOR APPLICATION NUMBER: US 60/074,788

PRIOR APPLICATION NUMBER: US 60/094,190

PRIOR APPLICATION NUMBER: US 60/094,190

PRIOR FILING DATE: 1998-07-27

NUMBER OF SEQ ID NOS: 33142

SEQ ID NO 9484

LENGTH: 438
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GENERAL INFORMATION:
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                                   ArgArgGlyAlaGlyAlaAlaArgGlyArgAlaSerTrp----
CGGCGACCCGCTGCGGCTCGCAGGCGGCGGCGATGGCGGTGATCGACAGCGACGAGG 64
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64.00
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40.48%
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Matches:
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Indels:
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APPLICANT: MATC J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING.
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS.
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR FILING DATE: 1998-07-27
NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 9378
LENGTH: 1533
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US-09-252-991A-7647/c
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GENERAL INFORMATION:
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NUMBER OF SEQ ID NOS:
SEQ ID NO 7647
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CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR APPLICATION NUMBER: US 60/094,190
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APPLICANT: Marc J.
TYPE: DNA
ORGANISM: Pseudomonas aeruginosa
-09-252-991A-9378
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o. 6551795
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NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
                                                                                                                                                                                                                                                                                           Rubenfield et al.

NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO
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US-09-252-991A-9347/c
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Query Match:
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PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF THE PRIOR PR
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TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR FILING DATE: 1999-02-18
PRIOR FILING DATE: 1998-02-18
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GENERAL INFORMATION: APPLICANT: Marc J.

Marc J.

Rubenfield et al

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est Local Similarity:
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IS-09-252-991A-13835/c
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S-09-252-991A-9347
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LENGTH: 2316
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CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
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GENERAL INFORMATION:
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TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
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                                                       COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/037,579 FILING DATE: 24-MAR-1993
                                                                                                                                                                                     ZIP: 94111-4187
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: IGE ISOFORMS AND METHODS OF USE NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
ATTORNEY/AGENT INFORMATION: NAME: Rowland, Bertram I
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                                        CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                  San Francisco
                                                                                                                                                                                                                                                                            California
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4 Embarcadero Center, Suite 3400
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Max, Edward E
                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                               Saxon, Andrew
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             107196.136
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36.84%
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37.57%
                                                                                  US/08/037,579A
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Matches:
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                                                                                                                                 Version
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Query Match:
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US-08-601-184-4/c
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TELEPHONE: (415) 781-1989
TELEPAX: (415) 398-3249
TELEFAX: 910 277299 FHT UR
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 4, Application US/08601184
Patent No. 6043345
                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION: APPLICANT: Zhang,
                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PCDOS/MSDOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                            APPLICANT: Saxon, Andrew
TITLE OF INVENTION: 19E ISOFORMS AND METHODS OF USE
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
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                                          ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: A-57950/BIR UCLA-233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 700 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION:
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                                                              FILING DATE:
CLASSIFICATION: 530
                                                                                                                                                                                                                                                                          CITY: San
                                                                                                                                                                                                                                                                                             STREET:
           NAME: Sherwood, Pamela J. REGISTRATION NUMBER: 36,677
                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                           ZIP: 941114187
REFERENCE/DOCKET NUMBER: A-57950-1/PJS UCLA233-1
                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
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                                                                                                                                                                                                                                                                                               4 Embarcadero Center, Suite 3400
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89..172
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63.00
42.86%
36.73%
37.28%
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Indels:
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Query Match:
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US-08-601-184-4
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US-08-713-928B-8/c
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TELEPAX: (415) 494-8771
TELEEX: 910 277299 EHT UR
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 700 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 8, Application US/08713928B Patent No. 5929304
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
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APPLICANT:
APPLICANT:
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NAME/KEY:
FILING LAND BOO CLASSIFICATION: 800 PRIOR APPLICATION DATA: US 60/003,737 APPLICATION NUMBER: US 60/003,737 DATE: 14-SEP-195
                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/713,928B
FILING DATE: 13-SEP-1996
FILING DATE: 13-SEP-1996
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                                                                                                                                                                                                                                                                                                                              APPLICANT: WEISSENBORN, DEBORAH I.
TITLE OF INVENTION: PRODUCTION OF LYSOSOMAL ENZYMES IN
TITLE OF INVENTION: PLANT-BASED EXPRESSION SYSTEMS
NUMBER OF SEQUENCES: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                 COUNTRY: USA
ZIP: 10036-2711
                                                                                                                                                                                                                                                STATE: New York
                                                                                                                                                                                                                                                                                                  ADDRESSEE:
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                                                                                                                                                                                                                                                                   New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                  CRAMER, CAROLE OISHI, KAREN K.
                                                                                                                                                                                                                                                                                                                                                                                                                  RADIN, DAVID N. CRAMER, CAROLE L.
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89..172
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Matches:
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IS-10-010-050A-2_COPY_1_30 (1-30) x US-08-713-928B-8 (1-2067)
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S-09-191-171-4/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
West Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No. 6149909
Patent No. 6149909 6143294
           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/
FILING DATE: 23-UTN-1995
APPLICATION NUMBER: AU PK9
FILING DATE: 14-NOV-1991
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               equence 4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (212) 869-974
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/191,171
                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
COULY SCOTT MURPHY & PRESSER STREET: 400 Garden City Plaza
CITY: Garden City
STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
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                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: HOPWOOD, John J.

TITLE OF INVENTION: SYNTHETIC ALPHA-L-IDURONIDASE AND GENETIC TITLE OF INVENTION: SEQUENCES ENCODING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Coruzzi, Laura A.
REGISTRATION NUMBER: 30,742
REFERENCE/DOCKET NUMBER: 7956-0011-999
TELECOMMUNICATION INFORMATION:
APPLICATION NUMBER:
                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS: unkr
TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 2067 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: (212) 790-9090
TELEFAX: (212) 869-9741
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLEMENTS, Peter R. MORRIS, Charles P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORSBORN, Annette M. NELSON, Paul V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ANSON,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ANSON, Donald S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               unknown
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62.50
48.28*
44.83*
36.98*
                                                   AU PK9490/91
                                                                                    US 08/494,104
AU PCT/AU92/00611
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Indels:
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Matches:
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GENERAL INFORMATION:

APPLICANT: SCOTT, Hamish S.

APPLICANT: ANSON, Donald S.

APPLICANT: ORSBORN, Annette M.

APPLICANT: NELSON, Paul V.

APPLICANT: NELSON, Paul V.

APPLICANT: CLEMENTS, Peter R.

APPLICANT: HOPWOOD, John J.

TITLE OF INVENTION: SYNTHETIC ALPHA-L-IDURONIDASE AND GENETIC TITLE OF INVENTION: SEQUENCES ENCODING SAME

NUMBER OF SEQUENCES: 7

CORRESPONDENCE COULTY SCOTT MURDHY & PRESSER
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 4, Application US/09385707 Patent No. 6238662
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, v.

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/385,707

FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 516-742-4366
TELEX: 230 901 SANS UR
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 12-NOV-1992
PRIOR APPLICATION DATA: US 08/084
APPLICATION NUMBER: US 08/084
FILING DATE: 07-JUL-1993
ATTORNEY/AGENT INFORMATION:
NAME: DiGiglio, Frank S.
REGISTRATION NUMBER: 31,346
REFERENCE/DOCKET NUMBER: 8978
TELECOMMUNICATION INFORMATION:
TELEPHONE: 516-742-343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . No.:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
LOCATION:
                                                                                                                                                                                    STREET: 400 Garden City Plaza CITY: Garden City
STATE: New York
                                                                                                                                                   COUNTRY: US
ZIP: 11530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: 510-742-4366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH:
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                                                                                                                                                                      USA
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89..2047
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62.50
48.28%
44.83%
36.98%
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Indels:
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Matches:
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                                                      Version #1.25
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PRIOR APPLICATION DATA:
APPLICATION NUMBER:

08/494,104

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Percent Similarity:
Best Local Similarity:
Query Match:
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; LOCATION:
US-09-385-707-4
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US-09-639-696C-4/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 4, Application US/09639696C Patent No. 6524835
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 516-742-4366
TELEX: 230 901 SANS UR
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 2155 base pairs
TYPE: nucleic acid
STRANDENNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
TELEPHONE: 516-742-4343
TELEFAX: 516-742-4366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
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:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/639,696C
FILING DATE: 16-Aug-2000
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: DiGiglio, Frank S.
REGISTRATION NUMBER: 31,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                   ORSBORN, Annette M.

NELSON, Paul V.

CLEMENTS, Peter R.

MORRIS, Charles P.

HOPWOOD, John J.

TITLE OF INVENTION: SYNTHETIC ALPHA-L-IDURONIDASE AND GENETIC SEQUENCES ENCODING SAME
                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: NIXON PEABODY LLP
                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: SCOTT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1109 AGGCGGAGGTGGTGGCCAGTAGCA 1083
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                                                                                                                                                                                                      STREET: 990 Stewart Avenue
CITY: Garden City
STATE: New York
COUNTRY: USA
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48.28%
44.83%
36.98%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hamish S.
Donald S.
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Indels:
Gaps:
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US-10-010-050A-2_COPY_1_30 (1-30) x US-09-639-696C-4 (1-2155)
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US-09-191-171-7/c
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                  Sequence 7, Application US/09191171
Patent No. 6149909
Patent No. 6149909 6143294
                                                                                                                                                                                                                                                                                                                                                                      GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO: 4:
                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                       APPLICANT: CLEMENTS, Peter R.
APPLICANT: MORRIS, Charles P.
APPLICANT: HOPMOOD, JOHN J.
TITLE OF INVENTION: SYNTHETIC ALPHA-L-IDURONIDASE AND GENETIC
TITLE OF INVENTION: SEQUENCES ENCODING SAME
                                                                                                                                                                                                                                                                                                                             APPLICANT: SCOTT, Hamish S. APPLICANT: ANSON, Donald S.
                    COMPUTER READABLE FORM:
                                                                                                                                                  NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                           STREET:
MEDIUM TYPE: Floppy disk
                                                      COUNTRY: USA
                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: Pokalsky, Ann R.
REGISTRATION NUMBER: 34,697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 2155 base pairs
TYPE: nucleic acid
TYPE: strandedness: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 2249/304
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1169 CGAAGGGGTGCGGGTAGCTCAGGAAGGCATTGTCGTTGCTCAGGAGCGCGTAGGGA 1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1109 AGGCGGAGGTGGTGGTTGGCCAGTAGCA 1083
                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11 ArgAlaSerTrpCysTrpAlaLeuAla 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 ArgArgGlyAla-----
                                                                     T: 400 Garden City Plaza
Garden City
: New York
                                      11530
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APPLICATION NUMBER: AU PK9490/91
FILING DATE: 14-NOV-1991
APPLICATION NUMBER: AU PCT/AU92/00611
FILING DATE: 12-NOV-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 09/191,171 FILING DATE: 13-NOV-1998 APPLICATION NUMBER: US 08/494,104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 08/084,254 FILING DATE: 07-JUL-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: CDS
LOCATION: 89..2047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: 516-832-7572
TELEFAX: 516-832-7555
                                                                                                                                                                                                                                                                                      ORSBORN, Annette M. NELSON, Paul V.
                                                                                                                                  SCULLY SCOTT MURPHY & PRESSER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48.28%
44.83%
36.98%
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62.50
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Matches:
Conservative:
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Indels:
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SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:

PC-DOS/MS-DOS

APPLICATION NUMBER: US/09/191,171

FILING DATE:

COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-

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REFERENCE/DOCKET NUMBER: 8978
TELECOMMUNICATION INFORMATION:
TELEPHONE: 516-742-4343
TELEFAX: 516-742-4366
TELEX: 230 901 SANS UR
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 4480 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'S-10-010-050A-2_COPY_1_30 (1-30) x US-09-191-171-7 (1-4480)
                                                                                                                                                                                                                                                                                                                                                                       S-09-385-707-7/c
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est Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              lignment Scores:
                                                                                                                                                                                                                                                                                                   Sequence 7, Application US/09385707
Patent No. 6238662
GENERAL INFORMATION:
                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
APPLICANT:
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS: SCULY SCOTT MURPHY & PRESSER STREET: 400 Garden City Plaza CITY: Garden City
STATE: New York
                                                                                                                APPLICANT: ORSBORN, Annette M.
APPLICANT: NELSON, Paul V.
APPLICANT: CLEMENTS, Peter R.
APPLICANT: MORRIS, Charles P.
APPLICANT: HOPWOOD, John J.
TITLE OF INVENTION: SYNTHETIC ALPHA-L-IDURONIDASE AND GENETIC TITLE OF INVENTION: SEQUENCES ENCODING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 07-JUL-1993
ATTORNEY/AGENT INFORMATION:
NAME: Digiglio, Frank S.
REGISTRATION NUMBER: 31,346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: AU PCT/AU92/00611
FILING DATE: 12-NOV-1992
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: AU PK9490/91 FILING DATE: 14-NOV-1991 PRIOR APPLICATION DATA:
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APPLICATION NUMBER: US 08
FILING DATE: 23-JUN-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 08/084,254
                                                                                                                                                                                                                                                                                                                                                                                                                                 2132 AGGCGGAGGTGGTGTTGGCCAGTAGCA 2106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2192 CGAAGGGGTGCCGGGTGGTAGCTCAGGAAGGCATTGTCGTTGCTCAGGAGCGCGTAGGGGA 2133
                                                                                                                                                                                                                                                                                                                                                                                                                                                             11 ArgAlaSerTrpCysTrpAlaLeuAla 19
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                                                                                                                                                                                                                                                                 SCOTT, Hamish S. ANSON, Donald S.
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62.50
48.28%
44.83%
36.98%
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Matches:
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Search completed: April 25, 2004, 05:51:41 Job time : 12.9583 secs
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Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                 Score:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 516-742-4366
TELEX: 230 901 SANS UR
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
ATOMEY/AGENT INFORMATION:
NAME: DIGIGILO, Frank S.
NAME: DIGIGILO, Frank S.
REGISTRATION NUMBER: 31,346
REFRENCE/DOCKET NUMBER: 8978
TELECOMUNICATION INFORMATION:
TELEPHONE: 516-742-4343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 4480 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/09/385,707
                                                                                                                                                2192 CGAAGGGGTGCGGTAGCTCAGGAAGGCATTGTCGTTGCTCAGGAGCGCGTAGGGGA 2133
                                                                        2132 AGGCGGAGGTGTTGGCCAGTAGCA 2106
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MODEL=frame+ p2...model -DEV=x1h
Q=/cgn2 1/USPTQ spool/US10010050/runat_22042004_113203_27539/app_query.fasta_1.1372
D=N_Geneseq_29Jan04 -QFMT=fastap -SUFFIX=rrg -MINMATCH=0.1 -LOOPCL=0
LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
LIST=45 -DCCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15
MODE=LOCAL -OUTFMT=pto -NORM=ext -HEARSTES=500 -MINLEN=0 -MAXLEN=200000000
USER=US10010050 @CGN 1 1819 @runat 22042004 113203 27539 -NCPU=6 -ICPU=3
NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=150 -LONGLOG
DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPDXT=0.5 -FGAPOP=6
PGAPEXT=7 -YGAPOP=10 -YGAPDXT=0.5 -DELOP=6 -DELEXT=7
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Listing first 45 summaries
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Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Fgapop 6.0 , Delext
Delop 6.0 , Delext
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Copyright (c) 1993 - 2004 Compugen Ltd.
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     AAK93424
AAK92158
AAX02855
AAZ24826
AAK94829
ABQ40653
ABQ40652
ABQ13702
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Aak92158 Human rDN
Aax02855 Human zsi
Aaz24826 Human sec
Aak94829 Human ful
Abq40653 Oligonucl
Abq40653 Oligonucl
Abq13702 Oligonucl
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RESULT 1
AAK93424
ID AAK9
XX AAK9
AC AAK9
AC AAK9
AC Huma
XX Huma
XX Homc
CS Homc
XX Homc
YX Homa
XX Homc
XX Huma
XX H
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11-JAN-2000;
02-MAY-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human cDNA clone representative sequence,
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2000JP-00118774.
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830 Primers useful for synthesizing full length cDNA clones and their use

WPI; 2001-524255/58.

Ota T,

Nishikawa T, su A, Sugiyama

Isogai T, ma T, Nagai

Hayashi K, K, Kojima

Ishii 18, Otsı hii S, Otsuki

Kawai T, Ko

in genetic manipulation

Example 11; SEQ ID NO 1884; 1380pp + Sequence Listing; English

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08-JUL-1999;
11-JAN-2000;
                                                                                                                      07-JUL-2000;
                                                                                                                                     05-SEP-2001
                                                                                                                                                     EP1130094-A2
                                                                                                                                                                   Homo sapiens.
                                    WPI; 2001-524255/58
                                                                                         02-MAY-2000;
Claim
                     830 Primers useful for synthesizing full length cDNA clones and their use
                                                    Wakamatsu
              genetic manipulation.
2; SEQ ID NO 618; 1380pp
                                                                                                                                                                                  full length cDNA; cDNA synthesis; oligo-capping; ss
                                                           Nishikawa T,
                                                                          HELIX RES INST.
                                                 A,
                                                                                        99JP-00194486.
2000JP-00118774.
2000JP-00183765.
                                                                                                                      2000EP-00114089
                                                   Sugiyama
                                                   Isogai T,
ma T, Nagai
+ Sequence Listing; English
                                                    Hayashi K,
K, Kojima
                                                    Ishii S,
1 S, Otsuki
                                                    Kawai Y;
T, Koga
                                                     Koga
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New secreted polypeptide, zsig46, and its fragments, related fusion

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RESULT 3
AAX02855
ID AAX0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to primers for synthesising full length cDNA clones. 830 cDNA molecules encoding a human protein have been isolated and nucleotide sequences of 5' - and 3' -ends of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cDNA libraries that were synthesised by the oligo-capping method. The primers enable the production of the full length cDNA easily without any special methods. The present sequence is the nucleotide sequence of the 5'-end of a cDNA provided in the invention. Note: The sequence data for this pattent did not form part of the printed specification, but was obtained in CD-ROM format directly from EPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 697 BP; 183 A; 160
                                                                                                                                                                                                                                                                                                               Secreted protein; zsig46; human; chromosome 13; thyroid; disease; hypothyroidism; Graves' disease; thyrotoxicosis; thyroid cancer; Hirschsprung's disease; neuronal ceroid-lipofucinosis; Wilson diseaser syndrome; immunoassay; detection; anti-idiotypic antibody;
                                                                                                                                                                                                                                        CDS
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                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                               Human zsig46 DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                  AAX02855;
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                                                                                                                                                                                                                                                                                                       therapy; diagnostic; ss.
                      P-PSDB;
                                                          Sheppard PO,
                                                                                                             24-JUL-1997;
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                                  1999-142930/12.
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Conservative: Mismatches: Indels:

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Sequence 697

BP; 183 A; 160

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186 G; 163

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US-10-010-050A-2_COPY_1_30 (1-30) x AAK93424 (1-697)

1 MetArgArgGlyAlaGlyAlaAlaArgGlyArgAlaSerTrpCysTrpAlaLeuAlaLeu

20

ATGCGGCGGGGCGCGCGCCTCGGGGACGCGCTTCCTGGTGCTGGGCCCCTGGCGCTG

밁 Ś 뮹 S

112 21 52

CTTTGGCTCGCGGTGGTTCCGGGCTGGTCC 141

LeuTrpLeuAlaValValProGlyTrpSer 30

Human cDNA 5'-end sequence, SEQ ID NO:

618.

AAK92158;

06-NOV-2001

(first entry)

AAK92158 standard; cDNA; 697

ВP

The invention relates to primers for synthesising full length cDNA clones. 830 cDNA molecules encoding a human protein have been isolated and nucleotide sequences of 5'- and 3'-ends of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cDNA libraries that were synthesised by the cligo-capping method. The primers enable the production of the full length cDNA easily without any special methods. The present sequence was used as the representative sequence from a human clone which was used in homology searches to identify the clone. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in CD-ROM format directly from

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    19-MAR-1998;
19-MAR-1998;
19-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; secreted protein; fusion protein; gene therapy; protein therapy; diagnosis; tissue; cancer; tumour; neurodegenerative disorder; leukaemia; developmental abnormality; foetal deficiency; blood; allergy; renal; ds; immune system; asthma; lymphocytic disease; brain; hepatic; lymphoma; inflammation; ischaemic shock; Alzheimer's disease; restenosis; AIDS; inflammation; ischaemic shock; Alzheimer's disease; restenosis; AIDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     cognitive disorder; schizophrenia; prostate; obesity; osteoclast; thymus; osteoporosis; arthritis; testis; lung; thyroiditis; thyroid; digestion; endocrine; metabolism; regulation; malabsorption; gastritis; neoplasm.
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                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
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98US-0078563P.
98US-0078566P.
98US-0078573P.
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19-MAR-1998;
19-MAR-1998;
19-MAR-1998;
19-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             This sequence represents a nucleic acid molecule which encodes a secreted human protein. The gene number, and the clone it is derived from, are detailed in the descriptor line. The gene can be used to generate fusion proteins by linking to the gene to a human immunoglobulin Fc portion (e.g. AAZ24802) for increasing the stability of the fused protein as compared to the human protein only. The invention relates to 95 novel genes and their fragments (nucleic acid sequences: AAZ24811-Z24907; amino acid sequences AAY41308-Y41404) which are useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. Also, pathological conditions can be diagnosed by determining the amount of the new polypupides in a sample or by determining the presence of mutations in the new polynucleotides. Specific uses are described for each of the 95 polynucleotides, based on which tissues they are most highly expressed in (see AAZ24811 for described uses)
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01-APR-1998;
01-APR-1998;
                        Human; full length cDNA; cDNA synthesis; oligo-capping;
                                                   Human
                                                                              06-NOV-2001
                                                                                                        AAK94829;
                                                                                                                                   AAK94829 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New isolated human genes, useful for diagnosis and treatment of e.cancers, neurological disorders, immune diseases, inflammation or
                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1751 BP;
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DB; AAY41323.
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                                                  full-length cDNA,
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98US-0078576P.
98US-0078577P.
98US-0078578P.
98US-0078578P.
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98US-0080312P.
98US-0080313P.
98US-0080314P.
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                                                  SEQ ID NO: 3977.
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Mismatches:
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H, Ebner R,
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R, Lafleur DW, Olsen HS;
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RESULT 6
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ID ABQ406
XX ABQ406
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XX DT 12-JUL
DT 12-JUL
DT Oligon
XX CHuman;
KW Human;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08-JUL-1999;
11-JAN-2000;
02-MAY-2000;
                        drug; side effect; cancer; central nervous system; cardiovascular; gastrointestinal; respiratory system; single nucleotide polymorphism; SNP; cell differentiation; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 2120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 8; SEQ ID NO 3977; 1380pp + Sequence Listing; English.
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Homo sapiens
                                                                  Human; cytosine methylation; 5'-CpG-3'; uracil; cytosine; diagnosis;
                                                                                                Oligonucleotide for detecting cytosine methylation SEQ ID NO 27244.
                                                                                                                               12-JUL-2002
                                                                                                                                                                                       ABQ40653 standard; DNA; 630 BP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0 Primers useful for synthesizing full length cDNA clones
genetic manipulation.
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DB; AAM93870.
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2000JP-00118774.
2000JP-00183765.
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                                                                                                                               (first entry)
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a T, Nagai K, Kojima
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Otsuki T, Koga
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                                                                                                                                            RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Determining the degree of cytosine methylation in genomic DNA, diagnosis and prognosis, comprises selective hybridization of from chemically treated DNA.
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05-SEP-2000;
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              Oligonucleotide for detecting cytosine methylation SEQ ID NO 27243
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 630 BP; 219 A; 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              disclosure of
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                                               12-JUL-2002
                                                                               ABQ40652;
                                                                                                             ABQ40652 standard;
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                                                                                                                                                                            272 TTTTGGTTCGCGGTGGTTTCGGGTTGG
                                                                                                                                                                                                                                                                                                                                                              Similarity:
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2000DE-01044543
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                                               (first entry)
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75.86%
75.86%
77.51%
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methylation of a particular cytosine in a motif 5'-CpG-3', present in a C genomic sample of DNA. The sample is treated chemically to convert C cytosine (C) but not methylated C, to uracil, then part of the genomic DNA that contains the target C is amplified to form a labeled amplicon. The amplicon is hybridised to two classes, each with at least one member, C of oligonucleotides and/or peptide-nucleic acid (PNA) oligomers and the C degree of hybridisation to both classes is determined from the label on the amplicon. From the ratio of labels hybridised to the two classes of coligomers, the degree of methylation is calculated. The method is used: (i) for diagnosis and/or prognosis of side effects of therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders of the central corvous, cardiovascular, gastrointestinal and respiratory systems etc., particularly by detecting mutations or single nucleotide polymorphisms (SNP's); and (ii) for differentiation of cell or tissue types and for investigating cell differentiation. The method allows the methylation status of many C residues to be determined simultaneously. ABQ13410-C ABQ54121 represent genomic DNA sequences used to illustrate the method constant constants.
ABQ13702
ID ABQ:
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05-SEP-2000; 2000DE-01044543.
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21 LeuTrpLeuAlaValValProGlyTrp 29

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US-10-010-050A-2_COPY_1_30 (1-30)

1 MetArgArgGlyAlaGlyAlaAlaArgGlyArgAlaSerTrpCysTrpAlaLeuAlaLeu

x ABQ13702 (1-631)

ATGCGGCGGGGGGGGGGTTCGGGGACGCGTTTTTTGGTGTTTGGGGTTTTGGCGTTTG

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commethylation describes a novel method for determining the degree of commethylation of a particular cytosine in a motif 5'.CpG-3', present in a cytosine (C) but not methylated C, to uracil, then part of the genomic Cy DNA that contains the target C is amplified to form a labeled amplicon. The amplicon is hybridised to two classes, each with at least one member, CC of oligonuclectides and/or peptide-nucleic acid (PNA) oligoners and the cytosine contents, the degree of hybridisation to both classes is determined from the label on the amplicon. From the ratio of labels hybridised to the two classes of coligoners, the degree of methylation is calculated. The method is used: (C) in four diagnosis and/or prognosis of side effects of therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders of the central corrous, cardiovascular, gastrointestinal and respiratory systems etc., CC particularly by detecting mutations or single nucleotide polymorphisms (SNP's); and (ii) for differentiation of cell or tissue types and for investigating cell differentiation. The method allows the methylation central convertible polymorphisms of the central convertible polymorphisms of the method allows the methylation convertible polymorphisms of the method collines the methylation central collines of many C residues to be determined simultaneously. ABQ13410-cut determining the degree of cytosine methylation described in the disclosure of the invention
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                                                                                                                                        Sequence 631
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05-SEP-2000;
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LeuTrpLeuAlaValValProGlyTrp

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MetArgArgGlyAlaGlyAlaAlaArgGlyArgAlaSerTrpCysTrpAlaLeuAlaLeu |||||||||||||

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ATGCGGGGGGGGGGGTTCGGGGACGCGTTTTTGGTGTTTGGGTTTTTGGCGTTG

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juery Match:
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                                                                                                                                                        This invention describes a novel method for determining the degree of C methylation of a particular cytosine in a motif 5'-CpG-3', present in a genomic sample of DNA. The sample is treated chemically to convert cytosine (C) but not methylated C, to uracil, then part of the genomic DNA that contains the target C is amplified to form a labeled amplicon. The amplicon is hybridised to two classes, each with at least one member, of oligonuclectides and/or peptide-nucleic acid (PNA) oligoners and the degree of hybridisation to both classes is determined from the label on the amplicon. From the ratio of labels hybridised to the two classes of cligomers, the degree of methylation is calculated. The method is used: (i) for diagnosis and/or prognosis of side effects of therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders of the central nervous, cardiovascular, gastrointestinal and respiratory systems etc., particularly by detecting mutations or single nucleotide polymorphisms (SNP's); and (ii) for differentiation of cell or tissue types and for investigating cell differentiation of cell or tissue types and for status of many C residues to be determined simultaneously. ABQ13410-ABQ54121 represent genomic DNA sequences used to illustrate the method of disclosure of the invention
                                                  Percent Similarity:
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05-SEP-2000; 2000DE-01044543.
                                                                                   No.:
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                                                                                                                                                                                                                                                                                                                    cc rhis invention describes the isolation of a novel human secreted protein, zsig46 encoded by a gene on chromosome 13 which is mainly expressed in ct the thyroid. This product can be used to study secretion of proteins from cc cells and also to treat or prevent deficient expression of zsig46, which cc may be associated with thyroid diseases (e.g. hypothyroidism, Graves' disease, thyrotoxicosis, thyroid cancer etc.) or with diseases that crowlve genes in the same region of chromosome 13 (e.g. Hirschisprung's cc disease, neuronal ceroid-lipofucinosis, Wilson disease and Reiger syndrome). Antibodies and other binding proteins, are used as immunoassay reagents to detect zsig46 or cells expressing it, e.g. for assessing thyroid function to produce anti-idiotypic antibodies, for affinity curification of zsig46, to screen expression libraries, to neutralise zsig46 activity, and to deliver toxins, radioisotopes etc. for therapeutic or diagnostic purposes. Agonists of the product can be used to promote growth, differentiation and proliferation of specific cell types, e.g. for treating (extra)thyroid diseases or as additive to cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New secreted polypeptide, zsig46, and its fragments, related fusion proteins - used for diagnosis and treatment of thyroid disorders or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Secreted protein; zsig46; human; chromosome 13; thyroid; disease; hypothyroidism; Graves' disease; thyrotoxicosis; thyroid cancer; Hirschsprung's disease; neuronal ceroid-lipofucinosis; Wilson disease; Reiger syndrome; immunoassay; detection; anti-idiotypic antibody;
                                                                                                                                                                                                                                        Sequence 1038
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       compound s activity; (1) a culture compound that inhibits part product is or antiscing activity of a gene on which the strains; or (13) identifying a compound that inhibits activity of a gene in an operor required for proliferation; (7) identifying a compound that influences the activity of the gene product or that has an activity against a biological pathway required for proliferation, or that inhibits cellular proliferation; (8) identifying a gene required for cellular proliferation or the biological pathway in which a proliferation-required gene or its gene product lies or a gene on which the test compound that inhibits proliferation of an organism acts; (9) manufacturing an antibiotic; (10) profiling a compound s activity; (11) a culture comprising strains in which the gene product is overexpressed or underexpressed; (12) determining the extent to which each of the strains is present in a culture or collection of strains; or (13) identifying the target of a compound that inhibits the
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Wall
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06-SEP-2001; 2001US-0094893.
25-0CT-2001; 2001US-0342923P.
08-FBB-2002; 2002US-00072851.
06-MAR-2002; 2002US-0362699P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bordetella pertussis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Prokaryotic essential gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACA27320;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACA27320
                                                                                                                                                                                                                                                             The invention relates to an isolated nucleic acid comprising any one of the 6213 antisense sequences given in the specification where expression of the nucleic acid inhibits proliferation of a cell. Also included are:

(1) a vector comprising a promoter operably linked to the nucleic acid encoding a polypeptide whose expression is inhibited by the antisense nucleic acid;

(2) a host cell containing the vector; (3) an isolated
                                                                                                                                                                                                                                                                                                                                                                                           Claim 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                          New antisense nucleic acids, useful for identifying proteins or screening for homologous nucleic acids required for cellular proliferation to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Antisense; ds;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                          isolate candidate molecules for rational drug discovery programs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ELIT-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2003-029926/02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 design;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard; DNA; 1071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LeuTrpLeuAlaValValProGlYTrp 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YTNTGGYTNGCNGTNGTNCCNGGNTGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zamudio C,
Trawick JD,
                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 15190; 1766pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   prokaryotic
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Carr (
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c,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 essential gene;
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Yamamoto R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cell proliferation;
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Foreyth
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Xu HH;
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RESULT 12
ABX47735/c
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Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               proliferation of an organism. The antisense nucleic acids are useful for identifying proteins or screening for homologous nucleic acids required for cellular proliferation to isolate candidate molecules for rational drug discovery programs, or for screening homologous nucleic acids required for proliferation in cells other than S. aureus, S. typhimurium, K. pneumoniae or P. aeruginosa. The present sequence is one of the target prokaryotic essential genes. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  prokaryotic essential genes. Note: The sequence not form part of the printed specification, but electronic format directly from WIPO at
                                                             New nucleic acid associated with lactation, and muscle and deposition, useful for genome mapping, gene identification cattle breeding, or for genetically improving cattle.
                                                                                                                                                                                                                                                                                                                                                                                                     Bovine; ss; EST; expressed sequence tag; lactation; muscle deposition; fat deposition; genome mapping;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1071 BP; 132 A; 381 C;
                                                                                                                     WPI; 2003-110599/10
                                                                                                                                                                                       (MATH/)
(TAON/)
                                                                                                                                                                                                                                           12-JAN-1999;
11-JAN-2000;
                                                                                                                                                                                                                                                                                 24-SEP-2001; 2001US-00960352
                                                                                                                                                                                                                                                                                                             26-SEP-2002
                                                                                                                                                                                                                                                                                                                                      US2002137139-A1
                                                                                                                                                                                                                                                                                                                                                                  Bos Taurus
                                                                                                                                                                                                                                                                                                                                                                                          gene analysis; cattle breeding.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Bovine EST associated with lactation/muscle/fat deposition #12900.
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                                                                                                                                                                                                                (BYAT/)
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                                                                                                                                              JC,
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                                                                                                                                                                                                                BYATT J C.
                                                                                                                                                                         TAO N.
WARREN W C.
                                                                                                                                                                                                    MATHIALAGAN N.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGCCTGGCGCAGGCTGGCCGATATCCGGCCGGACGTGGTGCTGGGCATGGGCGGCTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard; cDNA; 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TrpLeuAlaValProGlyTrp
                                                                                                                                                Mathialagan
                                                                                                                                                                                                                                            2000US-00480902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
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71.00
53.57%
42.86%
42.01%
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                                                                                                                                                                                                                                                                                                                                                                                                        genome mapping; gene
                                                                                                                                                 Warren WC
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                                                                                                                                                                                                                                                                                                                                                                                            LMFD;
cene identification;
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The invention relates to a purified nucleic acid molecule associated with lactation or muscle and fat deposition (designated LMFD), derived from

Claim 2; SEQ ID NO 12900; 245pp; English

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RESULT 1:
ADCO8897
ID ADCC
KX ADCC
KX ADCC
KX ADCC
KX Plan
KW Carr
KW Carr
KW Carr
KW Genr
KW Sen
KW Cory
XX Ory;
XX O
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cattle, and the LMFD nucleic acid can specifically hybridise to a second concleic acid molecule comprising any of 15112 nucleotide sequences, cappearing as ABX34836-ABX49947, or complements of them. Also included are functions in the cell to cause termination of transcription and addition of polyadenylated ribonuclectides to a 3' end of the mRNA molecule; and copyladenylated ribonuclectides to a 3' end of the mRNA molecule; and complementary nucleic acid sequences or its complement or fragment) with a complementary nucleic acid molecule obtained from the bovine cell or tissue, where hybridisation between the marker nucleic acid, where complementary nucleic acid molecule obtained from the bovine cell or complementary nucleic acid molecule obtained from the bovine cell or complementary nucleic acid molecule obtained from the bovine cell or complementary nucleic acid molecule obtained from the bovine cell or complementary nucleic acid molecule obtained from the bovine cell or complementary nucleic acid molecule obtained from the bovine cell or complementary nucleic acid molecule. The marker nucleic acid, where complementary nucleic acid is predictive of the detection of the complementary nucleic acid is used for clevel or pattern of the complementary nucleic acid is used for clet is useful for genome mapping, gene identification and analysis, cattle breeding, preparation of constructs for use in cattle gene expression, or for genetically improving cattle. The present sequence expression, or clectronic format from the USPTO web site:

C sequence was not shown in the specification but was obtained in clectronic format from the USPTO web site:
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Best Local Similarity:
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                            22-JUN-2001; 2001US-0300112P.
26-SEP-2001; 2001US-0325277P.
20-DEC-2001; 2001US-0342327P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               plant biotechnology; carbohydrate synthesis; carbohydrate metabolism; carbohydrate degradation; carbohydrate; plant grain; grain filling; corn; tomato; banana; canola; cotton; peanut; sorghum; tobacco; sugarbeet; wheat; rice; protein; oil; starch; fibre; moisture content; cereal grain.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rice DNA sequence Seq ID323 related to grain filling.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADC08897 standard;
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                                                                                                                                                                       21-JUN-2002; 2002WO-IB002450.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       112
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rice; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGCAGGTGCAACACGTGGTCATGTGTCATGTTGCCGTACTTGGAGGCGTTCTTCATGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTCTGGGCCTGCCATGGGCAGCGCCCGCATCAGCATGG 14
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41.72%
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RESULT 14
ABX40924/c
ID ABX409
XX ABX409
XX ADX409
XX 20-FEB
XX Bovine
XX Bovine
XX Bovine
XX Bovine
XX US2002
XX US2002
XX ASEP
XX 24-SEP
XX 24-SEP
XX 12-JAN
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     polymuclectides comprising a nuclectide sequence encoding a protein which is involved in or associated with the synthesis, metabolism or degradation of carbohydrates in the plant grain and the expression of which is up-regulated during grain filling. The plant is selected from corn, tomato, banana, canola, cotton, peanut, sorghum, tobacco, sugarbeet, wheat, and rice. The invention may be useful for the improvement of protein, oil, starch, fibre and moisture content of the cereal grains. In addition, carbohydrate levels may be modified to a more desirable level using the present invention. The present sequence is a DNA sequence encoding a rice protein of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New plant genes encoding polypeptides having an activity involved in or associated with the synthesis, metabolism or degradation of carbohydrates in the plant grain useful in generating plants having improved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This invention, in the area of plant biotechnology, relates to novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nutritional properties.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zhu T, Cheng W, Briggs S,
Glazebrook J, Katagiri F,
                                                                                                                                                                                                                                                                                                         ABX40924;
                                                                                                     US2002137139-A1
                                                                                                                                                                  gene analysis; cattle breeding.
                                                                                                                                                                                Bovine; ss; EST; expressed sequence tag; lactation; IMFD; muscle deposition; fat deposition; genome mapping; gene identification;
                                                                                                                                                                                                                                    Bovine EST associated with lactation/muscle/fat deposition #6089
                                                                                                                                                                                                                                                                                                                                          ABX40924 standard; cDNA; 403
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ftp.wipo.int/pub/publishedpct_sequences.
                                  24-SEP-2001; 2001US-00960352
                                                                    26-SEP-2002
                                                                                                                                    Bos Taurus
                                                                                                                                                                                                                                                                       20-FEB-2003
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)B; ADC08057.
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                                                                                                                                                                                                                                                                                                                                                                                                            95
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                                                                                                                                                                                                                                                                                                                                                                                                            AGCTTGCCGCCGGCCGGCCGGG 115
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Kreps J, Provart N,
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12-JAN-1999;

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Clactation or muscle and fat deposition (designated LMPD), derived from C cattle, and the LMFD nucleic acid can specifically hybridise to a second mucleic acid molecule comprising any of 15112 nucleotide sequences, appearing as ABX34836-ABX49947, or complements of them. Also included are (1) a transformed cell having a nucleic acid comprising an LMFD nucleic acid linked to a promoter and a 3 non-translated sequence that C functions in the cell to cause termination of transcription and addition of polyadenylated ribonucleotides to a 3' end of the mRNA molecule; and (2) determining a level or pattern of a molecule in a bovine cell or tissue comprising: (a) incubating a marker nucleic acid comprising any of the 15112 nucleic acid sequences or its complement or fragment) with a complementary nucleic acid molecule obtained from the bovine cell or tissue, where hybridisation between the marker nucleic acid and the complementary nucleic acid permits the detection of the molecule; and (b) detecting the level or pattern of the complementary nucleic acid is predictive of the complementary nucleic acid is predictive of the complementary nucleic acid is predictive of the complementary nucleic acid is predictive of the complementary nucleic acid is predictive of the complementary nucleic acid is predictive of the complementary nucleic acid is predictive of the complementary nucleic acid is predictive of the complementary nucleic acid is predictive of the complementary nucleic acid is used for constructs for use in cattle gene expression, or for genetically improving cattle. The present sequence is one of the present sequence was not shown in the specification but was obtained in electronic format from the USPTO web site:
RESULT 15
ABX46110/c
ID ABX461
KX
AC ABX461
KX
TO ABX461
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KX
TO ABX461
KX
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query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ercent Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to a purified nucleic acid molecule associated with lactation or muscle and fat deposition (designated LMFD), derived from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2003-110599/10
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    Bovine EST
                                          21-FEB-2003
                                                                                                                             ABX46110
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                                                                                                                             standard; cDNA; 404
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    associated with lactation/muscle/fat deposition #11275
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(BYAT/)
(MATH/)
(TAON/)
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                                                                                                                                                                                                              12-JAN-1999;
11-JAN-2000;
                                                                                                                                                                                                                            24-SEP-2001; 2001US-00960352
                                                                                                                                                                                                                                      26-SEP-2002.
                                                                                                                                                                                                                                               US2002137139-A1
                                                                                                                                                                                                                                                                  gene analysis; cattle breeding.
                                                                                                                                                                                       (WARR/)
                                                                                                                                                                                                BYATT J C.
MATHIALAGAN
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2000US-00480902
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                                                                                                                                                                              Warren WC
                                                                                                                                                                                                                                                                        identification;
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New nucleic acid associated with lactation, and muscle and deposition, useful for genome mapping, gene identification cattle breeding, or for genetically improving cattle. analysis

Claim 2; SEQ ID NO 11275; 245pp; English.

Contribution or muscle and fat deposition (designated LMFD), derived from the LMFD nucleic acid can specifically hybridise to a second contribute acid molecule comprising any of 1512 nucleotide sequences, (c) appearing as ABX34836-ABX49947, or complements of them. Also included are c; (1) a transformed cell having a nucleic acid comprising an IMFD nucleic acid linked to a promoter and a 3′ non-translated sequence that confidence in the cell to cause termination of transcription and addition of polyadenylated ribonucleotides to a 3′ end of the mRNA molecule; and (c) determining a level or pattern of a molecule in a bovine cell or tissue comprising: (a) incubating a marker nucleic acid (comprising any complementary nucleic acid molecule betained from the bovine cell or tissue, where hybridisation between the marker nucleic acid and the complementary nucleic acid molecule obtained from the bovine cell or complementary nucleic acid molecule obtained from the molecule; and (b) detecting the level or pattern of the complementary nucleic acid, where clevel or pattern of the complementary nucleic acid is used for complementary in pattern of the molecule. The IMFD nucleic acid is used for the section, or pattern of a molecule in a bovine cell or tissue. C it is useful for genome mapping, gene identification and analysis, cattle breading, preparation of constructs for use in cattle gene expression, or for genetically improving cattle. The present sequence is one of the correspondence was not shown in the specification but was obtained in The invention relates to a purified nucleic acid molecule associated with lactation or muscle and fat deposition (designated LMFD), derived from electronic format from the USPTO web site: seqdata.uspto.gov/sequence.html?DocID=20020137139 present sequence was not shown in the specification

Sequence 404 BP; 91 A; 131 Ç 115 G; 67 Ή, 0 ď 0 Other;

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                  US-10-010-050A-2_COPY_1_30 (1-30)
                                                  Query Match:
                                                           Best Local
                                                                                                   Alignment Scores:
                                                                       Percent Similarity:
                                                            Similarity:
4 GlyAlaGlyAlaAlaArgGlyArgAlaSerTrpCys-----
                                          31.4
69.50
48.48%
45.45%
41.12%
                     x ABX46110 (1-404)
                                                   Matches:
Conservative:
Mismatches:
Indels:
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10
10
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В

304 GGAGCAGGTGCATCACGTGGTCCTGTGTCATGTTGCCGTACTTGGTGGCGTTCTTCATGG

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GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

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NODEL=frame+ p2n.model -DEV-xlh

NODEL=frame+ p2n.model -DEV-xlh

O=/cgn2 1/18PTO_spool/US10010050/runat_22042004_113204_27556/app_query.fasta_1.1372

.De-EST -QFMT=fastap -SUFFIX=rst -MINMATCH=0.1 -LOOPCH=0 -LOOPEXT=0

.DRITS=bits -START=1 -EXD=-1 -MATRIX=biosum62 -TRANS=human40.cdi -LIST=45

.UNITS=bits -START=1 -EXD=-1 -MATRIX=biosum62 -TRANS=human40.cdi -LIST=45

.DCCALICN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALICN=15 -MODE=LOCAL

.DCCALICN=200 -THR_SCORE=pct -THR_MIN=0 -TMAXLEN=200000000

.USER=US:10010050 @CGN 1 1 6233 @xunat 22042004_113204_27556 -NCPU=6 -ICPU=3

.NO_MMAP -LARGEQUERY -NEG SCORE=0 -WAIT -DSPBLOCK=100 -LONGLOG

.NO_MMAP -LARGEQUERY -NEG SCORE=0 -WAIT -DSPBLOCK=100 -CNGADEXT=0.5 -FGAPOP=6

DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPDE=10 -XGAPEXT=0.5 -FGAPOP=6
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Fgapop 6.0 , Fgapext
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            27513289 seqs, 14931090276 residues
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29: gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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ALIGNMENTS

REFERENCE	ORGANISM	KEYWORDS	VERSION	ACCESSION		DEFINITION	LOCUS	AU280382	RESULT 1
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 565)	Homo mapiens (numan)	EST.	AU280382.1 GI:28299609	AU280382	sequence.	AU280382 NIESE2 Homo sapiens cDNA clone NIESE2001763 5', mRNA	AU280382 565 bp mRNA linear EST 31-001-2003		

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                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 607)

Kim,N.S., Hahn,Y., Oh,J.H., Lee,J.Y., Ahn,H.Y., Chu,M.Y., Kim,M.R., Oh,K.J., Cheong,J.E., Sohn,H.Y., Kim,J.M., Park,H.S., Kim,S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: genomics@hri.co.jp
HRI human cDNA Project, Sugiyama, T.; Wakamatsu, A.; Irie, R.;
Umczawa, A.; Fukuma, M.; Kusakari, S.; Hata, J.; Ishii, S.; Yamamoto, C.;
Isono, Y.; Saito, K.; Nakamura, Y.; Masuho, Y.; Nagai, K.; Isogai, T.
HRI human cDNA project; cDNA library construction & 5'-end one
pass sequencing: Helix Research Institute.
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1532-3 Yana, Kisarau, Chiba 292-0812, Japan
Tel: 81-438-52-3975
Fax: 81-438-52-3986
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607 bp mRNA linear EST 06-MAR-2302
K-EST0129297 S13KMS5 Homo sapiens cDNA clone S13KMS5-67-D07 5',
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              52 Eoeun-dong Yuseong-gu, Tel: +82-42-860-4470
                                                                                                                                                                                                                                                                                                                                                                                   BM849262.1 GI:19205661
                                                           Korea Research Institute of Bioscience & Biotechnology
                                                                                 Genome Research Center
                                                                                                         Contact: Kim YS
                                                                                                                               Unpublished (2002)
                                                                                                                                             Kim, Y.S.
21C Frontier Korean EST Project 2001
                                                                                                                                                                                                                                                                                                                  Homo sapiens
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/mol_type="mRNA"
/db_xref="taxon:9606"
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e_lib="NIESE2"
                                      Daejeon 305-333, South Korea
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                                                                                                                                                                                                                                                                                                                                                                                                              623 bp mRNA linear EST 15-JUL-2003 ik38b05.yl HR85 islet Homo sapiens cDNA clone IMAGE:5783001 5' similar to SW:CLN5_HUMAN 075503 CLNS PROTEIN. [1] ;, mRNA sequence. BQ417448
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Plate: 67 row: D column: 07
                                                                                                           Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S., Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A., Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tagareishvili, R., Williams, T., Jackson, Y. and Bowers, Y.
                                      Endocrine Pancreas Consortium Unpublished (2000) Other ESTs: ik38b05.x1
                                                                                                                                                                                                  Melton,D., Brown,J., Kenty,G., Permutt,A., Lemishka,I., Scearce,M., Brestelli,J., Gra.
                                                                                                                                                                                                                                                                          Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                       Homo sapiens
                     Contact: Douglas Melton, Klaus H.
                                                                                                                                                                                                                                                                                                                                                                                             BQ417448.1
Endocrine Pancreas Consortium
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                                                                                                                                                                                                                                                                                                                                               sapiens (human)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     strand by Okayama-Berg method. The obtained CDNA vectors were used for transformation of competent cells E. coli Toplof by electroporation method. The cDNA libraries constructed by this method are full-length enriched cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /cell line="n".../lab host="Top10F'"
/clone_lib="S13KMS5"
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|mol_type="mRNA"
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cell_line="KMS-5"
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                          Kaestner,
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Lee, C

., Kaestner, K.,

& Hiroshi Inoue

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RESULT 4
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High quality sequence stop: 4
Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D.

cDNA Library Preparation: Life Technologies, Inc.

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can
                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; V
Mammalia; Eutheria; Primates; Catarrhini;
1 (bases 1 to 678)
NIH-MGC http://mgc.nci.nih.gov/
National Institutes of Health, Mammalian
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                            676 bp
602782325F1 NCI_CGAP_Brn67 Homo
5' mRNA server
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: dmelton@biohp.harvard.edu
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Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                             Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                    , mRNA sequence.
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Location/Qualifiers
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/note="Organ: Pancreas; Vector: pBluescript SK(-); Site_1:
NotI; Site_2: XhoI; cDNA made by oligo-dT priming.
Size-selected on agarose gel. Average insert size -1kb. 5'
XhoI site was destroyed after directional cloning.
Amplified once Contact information: Hiroshi Inoue, MD,
Metabolism Div. (Alan Permutt Lab), Washington University
School of Medicine, Box 8127, 660 South Euclid Ave., St.
Louis, MO 63110, E-mail: hinoue@imgate.wustl.edu, Tel:
314-362-1916, Fax: 314-747-2692."
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/clome="IMAGE:5783001"
/tissue_type="purified pancreatic islet"
/lab_host="DH10B"
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RESULT 5
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                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 787)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
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                                                                                                                                                                          found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLAM11253 row: n column: 06
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Location/Qualifiers
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/clone_lib="NCI_CGAP_Brn67"
/note="Organ: brain; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned uniddirectionally. Primer: Oligo dT.
Average insert size 2.3 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
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/db_xref="taxon:9606"
/clone="IMAGE:4933134"
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/tissue_type="cervical carcinoma cell line"
/lab_host="DH10B"
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                                                            /mol_type="mRNA"
/db_xref="taxon:9606"
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cDNA clone IMAGE:5105093 5',
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NIH-MCC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
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AGENCOURT_8103813 Lupski sympathetic_trunk Homo sapiens cDNA clone
IMAGE:6191057 5', mRNA sequence.
BQ719074
BQ719074.1 GI:21857971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. James R. Lupski
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
http://image.llnl.gov
plate: LLNM13590 row: n column: 18
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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/note="Organ: cervix; Vector: pCMV-SPORT6; Site 1: Not1;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.4 kb. Library prepared by Life
Technologies."
                   /clone lib="Lupski sympathetic trunk"
/note="Vector: pCMV-SPORT6 (Life Technologies); Site_1:
Not1; Site_2: Sal1; cDNA made by oligo-dT priming.
Directionally cloned using the following adaptors:
5'-TCGACCCACGGGTCCG-3' and
5'-GACTAGTTCTAGATCGCGAGCGGCCCT(15)-3'. Size selected >
1'kb for average insert length 1.9 kb. This is primary
library, non-amplified. Library constructed by Life
Technologies and donated by J. Lupski, M.D./Ph.D. (Baylor College of Medicine); available through Life
Technologies."
                                                                                                                                                                                                                                                   /tissue_type="sympathetic trunk"
/dev_stage="adult, 16 yr"
/lab_host="DH10B"
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/clone="IMAGE:6191057"
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mol_type="mRNA"
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                              US-10-010-050A-2_COPY_1_28 (1-28) x BI090566 (1-869)
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cDNA Library Arrayed by: Incyte Genomics, Inc.
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM11023 row: a column: 20
High quality sequence stop: 843.
Location/Qualifiers
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1 (bases 1 to 869)

NIH-MCC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
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Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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MetArgArgGlyAlaGlyAlaAlaArgGlyArgAlaSerTrpCysTrpAlaLeuAlaLeu 20
                                                                                                                                                                                                                   /clone_lib="NIH_MGC_10"
/note="Organ: cervix; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.5 kb. Library prepared by Life
Technologies."
                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                           /lab_host="DH10B"
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/cell_line="MGC36"
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923 bp mENA linear EST 01-MAY-200:
EX331615 Homo sapiens NEUROBLASTOMA COT 10-NORWALIZED Homo sapiens
CDNA Clone CS0DB009YC01 5-PRIME, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238.f
more information about this cluster, see
http://www.genoscope.cns.fr/
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Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
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Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
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mRNA sequence.
BF982158
                            602308976F1 NIH_MGC_88 Homo sapiens cDNA clone IMAGE:4400298
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                                                                                                                                                                                                                                                                                                                                                                                                                    sites of the pCMVSPORT 6 vector. Library was normalized
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/clone="CS0DB009YC01"
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National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
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High quality sequence stop: 693.
Location/Qualifiers
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
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1 (bases 1 to 1201)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished (2001)
On Feb 15, 2001 this sequence version replaced
                                                                                                                                                                                                                                                                                                                         AL546472
AL546472 Homo sapiens PLACENTA COT 25-NORM Clone CSODIO30YJ01 5-PRIME, mRNA sequence.
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                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
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/lab_host="PH10B (phage resistant)"
/clone_lib="NIH MGC_88"
/clone_lib="NIH MGC_88"
/clone_tib="Organ: small intestine; Vector: pCMV-SPORT6;
Site_1: NotI, Site_2: Sall; Cloned unidirectionally;
oligo-dT primed. Average insert size 1.767 kb. Library
enriched for full-length clones and constructed by Life
Technologies. Note: this is a NIH_MGC_Library."
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/mol_type="mRNA"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
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COT 25-NORMALIZED Homo sapiens cDNA
           gi:12879620
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RESULT 11
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BP 191 91006 EVRY cedex - France
Email: seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238.f For
more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq=CSODIO30CE01QP1&cluster=7238.f. Contact :
Feng Liang Email : fliang@lifetech.com URL :
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSODIO30CE01QP1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ897986 1222 bp mRNA linear EST 16-AUG-AGENCOURT_8482480 Lupski_dorsal_root_ganglion Homo sapiens cDNA clone IMAGE:6185883 5', mRNA sequence.
                                                                                                                                                                                Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. James R. Lupski
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Hissotience Corporation
DNA Sequencing by: Agencourt Hissotience Corporation
Clone distribution: MGC clone distribution information can
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLAM13577 row: g column: 04
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                                            quality sequence start: 7 quality sequence stop: 277.
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/note="Ist strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
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/clone="CS0DI030YJ01"
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                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov
Tissue Procurement: Kristi A. Egland, Ira Pastan
Tissue Procurement: Kristi A. Egland, Ira Pastan
CDNA Library Preparation: Invitrogen Corp
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM14279 row: j column: 21
                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 924)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
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                                                                                                                                                                  High quality sequence stop: 637
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clome lib="Lupski dorsal root ganglion"
/note="Vector: pCMV-SPORT6 (Life Technologies); Sit
Not1; Site 2: Sal1; cDNA made by Oligo-dT priming.
Directionally cloned using the following adaptors:
5'-TCGACCCACGCGTCCG-3' and
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/dev_stage="adult, 36 yr"
/lab_host="DHIOB"
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/mol_type="mRNA"
/db_xref="taxon:9606"
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/clone="IMAGE:6720309"
/cell_line="ZR-75-1, MC
                                                                                                                                            ocation/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             http://www.genoscope.cns.fr/
http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq=CSODL004CH02QPl&cluster=7238.f. Contact :
Feng Liang Email : fliang@lifetech.com URL :
Feng Liang Email : fliang@lifetech.com/ InVitroGen Corporation 1600
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: segref@genoscope.cns.fr, Web: www.genoscope.cns.fr Library was constructed by Life Technologies, a division of Invitrogen. This sequence belongs to sequence cluster 7238.f For more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 1077)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished (2001)
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1. (bases 1 to 1077)
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BP 191 91006 EVRY cedex - France
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Location/Qualifiers
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/note="1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized
                                                                                                                                                                /clone lib="Homo sapiens B CELLS (RAMOS CELL LINE)
                                                                                                                                                                                                                                                      /clone="CSODL004YP03"
/cell_type="B CELLS (RAMOS CELL LINE) COT 25-NORWALIZED'
/cell_line="RAMOS CELL LINE"
                                                                                                                                                                                                                                                                                                                                                                                                              organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                db_xref="taxon:9606"
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CELLS (RAMOS CELL LINE) COT 25-NORMALIZED
CSODL004YP03 5-PRIME, mRNA sequence.
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FEATURES

Pred. No.:

Alignment Scores:

Percent Similarity:

0.00152 127.00 96.43%

Length: Matches: Conservative:

OMMENT

OURCE

Snoo X342662 р

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REFERENCE
AUTHORS
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BF977311
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 589)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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S89 bp mRNA linear EST 22-JAN-2 602146485E1 NIH_MGC_62 Homo mapiens cDNA clone IMAGE:4305501 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLCM1172 row: i column: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC/DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BF977311.1 GI:12344526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA Library Preparation: CLONETECH I CDNA Library Arrayed by: The I.M.A.G.
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                                                     /organism="Homo sapiens"
/mol_type="mRNA"
/mb_xref="taxon:9606"
/db_xref="taxon:9606"
/clome="fMAGB:4305501"
/clome="fMAGB:4305501"
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/tissue_type="melanotic melanoma, high MDR"
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/tissue_type="melanotic melanoma, high MDR"
/tissue_type="melanotic melanoma, high MDR"
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/tissue_type="melanotic melanoma, high MDR"
/tissue_type="melanoma,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       location/Qualifiers
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                                              CA)
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                        Scores:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CA397574 S55 bp mRNA linear EST 06-NOV-2: cs92h10.y2 Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified): cs Homo sapiens cDNA clone cs92h10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \vdash
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Mol. Vis. 8 (4), 205-220 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi: Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 555)
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CA397574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Emaai: graeme@helix.nih.gov
Plate: 92 row: h column: 10
Seq primer: M13RP1 reverse primer
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tel: 301 402 3452
Fax: 301 496 0078
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Section on Molecular Structure and Function
National Eye Institute
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                                                                             /clone lib="Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified); cg"
/mote="Organ: Eye; Vector: pcMVSPORT6; Two different donor eyes (75-80 years old) yielded approximately 600 mg of dissected RPE/choroid tissue. This in turn yielded 340 ug of total RNA and 7 ug of mRNA. A directionally cloned cDNA library in the pcMVSPORT6 vector was constructed at Life Technologies (Rockville, MD; now part of Invitrogen Corp), essentially following the protocols of the SuperScript Plasmid System (Invitrogen Corp.
chttp://www.invitrogen.com/>). The library code designation was cs. For this library, cDNA inserts were cloned into the Notl/MJU sites of the vector. EST analysis was performed on the unamplified library at the NIH Intramural Sequencing Center (NISC)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NIH, Bethesda, MD 20892-2740, USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="RPE/choroid"
/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="cs92h10"
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                         21 LeuTrpLeuAlaValValProGly 28
                                                   40 ATGCGGCGGCGGCCGCGCTCGACGACCCGCTTGCTGGTGCTGGGCCCTGGCGCTG
                                                                    MetArgArgGlyAlaGlyAlaAlaArgGlyArgAlaSerTrpCysTrpAlaLeuAlaLeu 20
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Search completed: April 25, 2004, 05:46:19 Job time : 361.406 secs

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-FGAPOP=6 -FGĀPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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Pred. No, is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
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2262.168 Million cell updates/sec
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Result

Score

Query Match Length

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Description

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FILE REFERENCE: 97-38
CURRENT APPLICATION NUMBER: US/09/122,383A
CURRENT FILING DATE: 1998-07-24
EARLIER APPLICATION NUMBER: 60/053,613
EARLIER FILING DATE: 1997-07-24
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 1
LENGTH: 1486
                                                                                                                                                                                                                                                                                                                                                                          RESULT 1
US-09-122-383-1
                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                        Sequence 1, Application US/09122383A Patent No. US20020042093A1
                                                                                                                                                                                                                                             APPLICANT: Sheppard, Paul O.
APPLICANT: Gilbertson, Debra G.
TITLE OF INVENTION: SECRETED PROTEINS ENCODED
TITLE OF INVENTION: CHROMOSOME 13
                                                ORGANISM: Homo sapien
LOCATION: (47)...(1084)
                  NAME/KEY: CDS
                                   FEATURE:
                                                                       TYPE: DNA
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15 US-10-329-079-14
15 US-10-329-079-6
16 US-10-027-632-241716
17 US-10-027-632-241716
18 US-10-027-632-241716
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19 US-10-087-192-754
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US-09-122-383-13
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Sequence 39, Appl
Sequence 20063, A
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WESULT 3
US-10-653-595-26
; Sequence 26, Application US/10653595
; Publication No. US20040048304A1
; GRNERAL INFORMATION:
; APPLICANT: Ruben et. al.
; TITLE OF INVENTION: 95 Human secreted proteins
; FILE REFERENCE: PZ027P1C1
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US-10-010-050A-1
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1, Application US/10010050A Publication No. US20020173624A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Sheppard, Paul O.
APPLICANT: Gilberteson, Debra G.
APPLICANT: Gilberteson, Debra G.
TITLE OF INVENTION: SECRETED PROTEINS ENCODED BY HUMAN
TITLE OF INVENTION: CHROMOSOME 13
FILE REPERENCE: 97-38C1
CURRENT APPLICATION NUMBER: US/10/010,050A
CURRENT FILING DATE: 2002-03-26
PRIOR APPLICATION NUMBER: US 09/122,383
PRIOR FILING DATE: 1998-07-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: US 60/053,613 PRIOR FILING DATE: 1997-07-24
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NAME/KEY: CDS
LOCATION: (47)...(1084)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Homo
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CURRENT FILING DATE: 2003-09-03
PRIOR APPLICATION NUMBER: US 09/397945
PRIOR APPLICATION NUMBER: PCT/US99/05804
PRIOR APPLICATION NUMBER: PCT/US99/05804
PRIOR APPLICATION NUMBER: 60/078,566
PRIOR PILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,576
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,573
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PRIOR APPLICATION NUMBER: 60/078,574
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PRIOR PILING DATE: 1998-04-01
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PRIOR APPLICATION NUMBER: 60/078,578
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Query Match:
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LENGTH: 1751
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NAME/KEY: SITE
LOCATION: (1741)
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OTHER INFORMATION:
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LOCATION: (1729)
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OTHER INFORMATION:
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OTHER INFORMATION: n
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                 LeuTrpLeuAlaValValProGly 28
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JS-10-010-050A-2_COPY_1_28 (1-28)
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                                                                                           Percent Similarity:
                                                                                                                                               Alignment Scores:
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JS-09-397-945-26
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PRIOR APPLICATION NUMBER: 60/078,574

PRIOR FILING DATE: 1998-03-19

PRIOR APPLICATION NUMBER: 60/078,579

PRIOR APPLICATION 1998-03-19
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PRIOR FILING DATE: 1999-03-18
PRIOR APPLICATION NUMBER: 60/078,566
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NUMBER OF SEQ ID NOS: 470
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PRIOR FILING DATE: 1998-03-19
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NAME/KEY: SITE
LOCATION: (1520
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OTHER INFORMATION:
NAME/KEY: SITE
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ORGANISM: Homo sapiens
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OTHER INFORMATION:
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LOCATION: (1689
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LOCATION: (155)
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FILING DATE: 1998-03-19
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APPLICATION NUMBER: 60/078,578
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FILING DATE: 1998-04-01
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           FILE REFERENCE: 97-38C1
CURRENT APPLICATION NUMBER: US/10/010,050A
CURRENT FILING DATE: 2002-03-26
PRIOR APPLICATION NUMBER: US 09/122,383
PRIOR FILING DATE: 1998-07-24
PRIOR APPLICATION NUMBER: US 60/053,613
PRIOR FILING DATE: 1997-07-24
PRIOR PILING DATE: 1997-07-24
PRIOR PILING DATE: 1997-07-24
PRIOR FILING DATE: 1997-07-24
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Best Local Similarity:
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LENGTH: 1038
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APPLICANT: Gilbertson, Debra G.
TITLE OF INVENTION: SECRETED PROTEINS ENCODED
TITLE OF INVENTION: CHROMOSOME 13
FILE REFERENCE: 97-38
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EARLIER APPLICATION NUMBER: 60/053,613
EARLIER FILING DATE: 1997-07-24
NUMBER OF SEQ ID NOS: 19
                                                                                                                                                                                       APPLICANT: Sheppard, Paul O.
APPLICANT: Gilbertson, Debra G.
TITLE OF INVENTION: SECRETED PROTEINS ENCODED BY HUMAN
TITLE OF INVENTION: CHROMOSOME 13
SOFTWARE: FastSEQ for Windows Version 4.0
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OTHER INFORMATION: n is any nucleotide
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RESULT 8
US-10-329-079-6/c
; Sequence 6, Application US/10329079
; Publication No. US20030198981A1
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; NAME/KEY: misc_feature
; LOCATION: (1)...(1038)
; OTHER INFORMATION: n = A,T,C or
US-10-010-050A-13
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Best Local Similarity:
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Best Local Similarity:
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APPLICANT: FARNET, Chris
APPLICANT: ZAZOPOULOS, Emmanuel
APPLICANT: STAFFA, Alfredo
TITLE OF INVENTION: GENES AND PROTEINS INVOLVED IN THE BIOSYNTHESIS OF LIPOPEPTIDES
FILE REFERENCE: 3002-11US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn version 3.0 SEQ ID NO 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 14, Application US/10329079 Publication No. US20030198981A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/10/329,079
CURRENT FILING DATE: 2002-12-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 66
                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 7155
TYPE: DNA
ORGANISM: Streptomyces fradiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: Degenerate nucleotide sequence encoding zsig46 OTHER INFORMATION: polypeptide of SEQ ID NO:2
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ENGTH: 1038
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                                                                                                                              23 LeuAlaVal 25
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RESULT 9
US-10-027-632-241716
yS-quence 241716, Application US/10027632
publication No. US20020198371A1
GENERAL INFORMATION:
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Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR FILING DATE: 2000-07-12
PRIOR PELICATION NUMBER: US 60/198,676
PRIOR PELICATION NUMBER: US 60/193,483
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR FILING DATE: 2000-03-29
PRIOR PELICATION NUMBER: US 60/185,218
PRIOR PELICATION NUMBER: US 60/167,363
PRIOR PELICATION NUMBER: US 60/167,363
PRIOR PELICATION NUMBER: US 60/167,363
PRIOR PELICATION NUMBER: US 60/156,358
PRIOR PELICATION NUMBER: US 60/156,358
PRIOR PELICATION NUMBER: US 60/146,002
PRIOR PELICATION NUMBER: US 60/146,002
PRIOR PELICATION NUMBER: US 60/146,002
PRIOR PELICATION NUMBER: US 60/146,002
PRIOR PELICATION NUMBER: US 60/146,002
PRIOR PELICATION NUMBER: US 60/146,002
PRIOR PELICATION NUMBER: US 60/146,002
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Best Local Similarity:
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APPLICANT: ZAZOPOULOS, Emmanuel
APPLICANT: STAFFA, Alfredo
TITLE OF INVENTION: GENES AND PROTEINS INVOLVED IN THE BIOSYNTHESIS OF LIPOPEPTIDES
FILE REFERENCE: 3002-11US
CURRENT APPLICATION NUMBER: US/10/329,079
CURRENT FILING DATE: 2002-12-24
NUMBER OF SEQ ID NOS: 66
SOFTWARE: PATENTIN VETSION 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Polymorphisms in the Human Genome
FILE REFERENCE: 108827.129
                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 325720
SOFTWARE: FastSEQ for Windows Version 4.0
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CURRENT FILING DATE: 2002-04-30
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TYPE: DNA
ORGANISM: Streptomyces fradiae
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Microorganisms

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CURRENT APPLICATION NUMBER: US/10/027,632
CURRENT FILING DATE: 2002-04-30
PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR FILING DATE: 2000-07-12
PRIOR APPLICATION NUMBER: US 60/198,676
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR PILING DATE: 2000-03-29
PRIOR PILING DATE: 2000-02-24
PRIOR FILING DATE: 2000-02-24
                                                                                                                        Sequence 15190, Application US/10282122A Publication No. US20040029129A1
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-10-282-122A-15190
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Publication No. US20030204075A9
APPLICANT: Wang, Liangsu
APPLICANT: Zamudio, Carlos
APPLICANT: Malone, Cheryl
APPLICANT: Haselbeck, Robert
APPLICANT: Ohlsen, Kari
                                                                                                     SENERAL INFORMATION:
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10-027-632-241716
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PRIOR FILING DATE: 1999-08-09
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FILING DATE: 1999-11-23
APPLICATION NUMBER: US 60/156,358
FILING DATE: 1999-09-28
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US-10-087-192-754/c
. Sequence 754, Application US/10087192
. Sequence 754, MR20020182586A1
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Best Local Similarity:
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                                                                                                                                                                                                         GENERAL INFORMATION:
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  APPLICANT: Morris, David W.
APPLICANT: Engelhard, Eric K.
APPLICANT: Engelhard, Eric K.
TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: CANCER
FILE REFERENCE: 529452000122
CURRENT APPLICATION NUMBER: US(10/087,192
CURRENT FILING DATE: 2002-03-01
PRIOR APPLICATION NUMBER: US 09/747,377
PRIOR PILING DATE: 2000-120-22
PRIOR APPLICATION NUMBER: US 09/798,586
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PRIOR APPLICATION NUMBER: 60/269,308
PRIOR FILING DATE: 2001-02-16
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PRIOR FILING DATE: 2000-05-23
PRIOR APPLICATION NUMBER: 60/207,727
PRIOR FILING DATE: 2000-05-26
PRIOR FILING DATE: 2000-05-26
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TITLE OF INVENTION: Identification of Essential Genes in
FILE REFERENCE: ELITRA.034A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 78614
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ORGANISM: Bordetella pertussis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/230,335
FILING DATE: 2000-09-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/267,636
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                                                    Sequence 5227, Application US/10425114
Publication No. US20040034888A1
GENERAL INFORMATION:
ADDITION:
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Best Local Similarity:
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LENGTH: 276276; LENGTH: 276276
; TYPE: DNA
; ORGANISM: Homo sapiens
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LENGTH: 772
TYPE: DNA
ORGANISM: Homo sapiens
           APPLICANT: Liu, Jingdong
APPLICANT: Zhou, Yihua
APPLICANT: Kovalic, Davi
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Publication No. US20030148969A1
GENERAL INFORMATION:
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CURRENT FILING DATE: 2001-12-20
NUMBER OF SEQ ID NOS: 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Susan J. Myers
TITLE OF INVENTION: ANTISENSE MODULATION OF MUCIN 1, TRANSMEMBRANE EXPRESSION
FILE REFERENCE: RTS-0352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Kenneth W. Dobie APPLICANT: Susan J. Myers
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Zhou, Yihua
Kovalic, David |
Screen, Steven |
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APPLICANT: Gudmundsson Gudmundur
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                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/354,247 CURRENT FILING DATE: 2003-01-29 PRIOR APPLICATION NUMBER: US 10/060,902 PRIOR FILING DATE: 2002-01-30 NUMBER OF SEQ ID NOS: 36 SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With FILE REFERENCE: 38-21 (53313) B CURRENT APPLICATION NUMBER: US CURRENT FILING DATE: 2003-04-28

NUMBER OF SEQ ID NOS: 73128

SEQ ID NO 5227

TENGTH: 1257
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                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: n = A,T,C
                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: Homo sapiens
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NAME/KEY: misc_feature
LOCATION: (1)...(32210
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US-09-191-202A-1
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US-09-589-927-9	-09-589-927-	-09-589-927-	US-09-589-927-1	-08-601-184-	-08-037-579A	-09-641-638-	-09-671-3	-09-614-	-09-	02-	-09-252-991A	-09-214-808-	-08-750-007-4	-08-446-794A-5	-09-252-991A-1121	-09-252-991	-08-311-731#	-09-016-434-	-09-754-250-	-09-020-2	-08-938-8	-09-489-	-09-489-039A-6	US-09-023-655-738	US-09-144-085-3	-09-489-	9-489-039A-	US-09-489-039A-2735	9-489-039A-	US-09-069-023-2	US-09-621-976-11459
Sequence 7, Appli Sequence 9, Appli	5, Appl	equence 3,	1,	4	e 4,	e 50	መ	83	e 83	e 831	e 11793,	1, Appl	4	equence 5, Appl	equence 112:	equence 11039,	equence 25, Ar	11:	equence 3,	equence 2,		equence 11	equence 681	e 73	ез, в	equence 5264,	e 5631,	e 2735,	e 2986, A	equence 2, Appl	Sequence 11459, A

ALIGNMENTS

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RESULT 1
US-08-713-928B-8/c
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APPLICANT: CANDER, DAVID N.
APPLICANT: CRAWER, CAROLE L.
APPLICANT: OISHI, KAREN K.
APPLICANT: OISHI, KAREN K.
APPLICANT: WEISSUNGORN, DEBORAH L.
APPLICANT: WEISSUNGORN, DEBORAH L.
TITLE OF INVENTION: PLANT-BASED EXPRESSION SYSTEMS
                PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/003,737
FILING DATE: 14-SEP-1995
ATTORNEY/AGENT INFORMATION:
NAME: COTUZZÍ, LAURA A.
REGISTRATION NUMBER: 30,742
REFERENCE/DOCKET NUMBER: 7956-0011-9
                                                                                                                                                                                                                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/713,928B
                                                                                                                                                                                                                                                                                                                                      ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 1
                                                                                                                                                                             APPLICATION NUMBER: US/0 FILING DATE: 13-SEP-1996 CLASSIFICATION: 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 1155 Avenue of CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                   New York
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                     7956-0011-999
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TELEPHONE: TELEFAX: (

: (212) 790-9090 (212) 869-9741

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RESULT 2
US-09-191-171-4/c
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Query Match:
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Patent No. 6149909 6143294
GENERAL INFORMATION:
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                                                                            PRIOR APPLICATION NUMBER: US 08/494,104
FILING DATE: 23-UN-1995
APPLICATION NUMBER: AU PK9490/91
FILING DATE: 14-NOV-1991
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/191,171
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: CLEMENTS, Peter R.
APPLICANT: MORRIS, Charles P.
APPLICANT: HOPWOOD, John J.
TITLE OF INVENTION: SYNTHETIC ALPHA-L-IDURONIDASE AND GENETIC TITLE OF INVENTION: SEQUENCES ENCODING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
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                                 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: SCULLY SCOTT MURPHY & PRESSER STREET: 400 Garden City Plaza CITY: Garden City
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: unknown
                                                  APPLICATION NUMBER: AU PCT/AU92/00611 FILING DATE: 12-NOV-1992
                                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
               APPLICATION NUMBER:
                                                                                                                                                                                                                        FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ANSON,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ANSON, Donald S.
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07-JUL-1993
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62.50
48.28%
44.83%
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             US 08/084,254
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Matches:
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Indels:
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Best Local Similarity:
Query Match:
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US-09-191-171-4
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TELEX: 230 901 SANS UR
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                              COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARB: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/385,707
                                                                                                                                                                               ZIP: 11530
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: SCULLY SCOTT MURPHY & PRESSER
STREET: 400 Garden City Plaza
CITY: Garden City
STATE: New York
                                                                                                                                                                                                                                                                                                                                                        APPLICANT: CLEMENTS, Peter R.
APPLICANT: MORRIS, Charles P.
APPLICANT: HOPMOOD, JOHN J.
TITLE OF INVENTION: SYNTHETIC ALPHA-L-IDURONIDASE AND GENETIC
TITLE OF INVENTION: SEQUENCES ENCODING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION: TELEPHONE: 516-742-4343
                              PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
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ATTORNEY/AGENT INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 31,346
REFERENCE/DOCKET NUMBER: 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
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TELEPAX: 516-742-4366
                                                               CLASSIFICATION:
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                                                                                                                                                                                                                                    COUNTRY:
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                                                                                   FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1109 AGGCGGAGGTGGTGTTGGCCAGTAGCA 1083
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No. 6238662
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                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                             ORSBORN, Annette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCOTT, Hamish S. ANSON, Donald S.
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44.83%
40.58%
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62.50
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                                08/494,104
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Indels:
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Matches:
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NAME: DiGiglio, Frank S.
REGISTRATION NUMBER: 31,346
REFERENCE/DOCKET NUMBER: 89'

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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.:
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TELEPHONE: 516-742-4343
TELEFAX: 516-742-4366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
         COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Vers
CURRENT APPLICATION NUMBER: US/09/639,696C
FILING DATE: 16-Aug-2000
CLASSIFICATION : CUnknown>
PRIOR APPLICATION NUMBER: US 09/191,171
APPLICATION NUMBER: US 09/191,171
FILING DATE: 13-NOV-1998
APPLICATION NUMBER: US 08/494,104
ETHING DATE: 23-TWN-1056
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LOCATION:
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TYPE: nucleic acid
STRANDEDNESS: single
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                                                                                                                                                                                                                                                                                                                                                                                                            HOPWOOD, John J.
TITLE OF INVENTION: SYNTHETIC ALPHA-L-IDURONIDASE AND GENETIC SEQUENCES ENCODING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1109
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ADDRESSEE: NIXON PEABODY LLP
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                                                                                                                                                                                                                                                                                                     CITY: Garden City
STATE: New York
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FILING DATE: 23-JUN-1995
                                                                                                                                                                                                                                                                 ZIP: 11530
                                                                                                                                                                                                                                                                                   COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                       STREET: 990 Stewart Avenue
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NELSON, Paul V.
CLEMENTS, Peter R.
MORRIS, Charles P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ANSON, Donald S.
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Matches:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 7, Application Us, Patent No. 6149909
Patent No. 6149909 6143294
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APPLICANT: S
APPLICANT: I
APPLICANT: (
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SEQUENCE CHARACTERISTICS:
LENGTH: 2155 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOPTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . No.:
                                                                                                                                                                              NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: SCULLY SCOTT MURPHY & PRESSER
STREET: 400 Garden City Plaza
                                                                                                                                                                                                                                                                   APPLICANT: ORSBORN, Annette M.
APPLICANT: NELSON, Paul V.
APPLICANT: CLEMENTS, Peter R.
APPLICANT: MORRIS, Charles P.
APPLICANT: HOPWCOD, John J.
TITLE OF INVENTION: SYNTHETIC ALPHA-L-IDURONIDASE AND GENETIC TITLE OF INVENTION: SEQUENCES ENCODING SAME
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: AU PK9490/91
FILING DATE: 14-NOV-1991
APPLICATION NUMBER: AU PCT/AU92/00611
FILING DATE: 12-NOV-1992
APPLICATION NUMBER: US 08/084,254
FILING DATE: 07-JUL-1993
ATTORNEY/AGENT INFORMATION:
NAME: POKALSKY, Ann R.
REGISTRATION NUMBER: 34,697
                                                                                                                                                STREET: 400 Garder
CITY: Garden City
STATE: New York
                                                                                                               ZIP: 11530
                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1109 AGGCGGAGGTGGTGTTGGCCAGTAGCA 1083
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LOCATION:
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                                                                                                                                   USA
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PRIOR APPLICATION DATA:

US 08/494,104

APPLICATION NUMBER: FILING DATE:

US/09/191,171

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Best Local Similarity:
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FILING DATE: 12-NOV-1992
PRIOR APPLICATION DATE: 42-NOV-1992
PRIOR APPLICATION DATE: US 08/084,254
APPLICATION NUMBER: US 08/084,254
FILING DATE: 07-JUL-1993
ATTORNEY/AGRNT INFORMATION:
NAME: DIGIGLO, Frank S.
REGISTRATION NUMBER: 31,346
REFERENCE/DOCKET NUMBER: 39/98Z
TELECOMMUNICATION INFORMATION:
TELEPHONE: 516-742-433
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TELEX: 230 901 SANS UR
INFORMATION FOR SEQ ID NO:
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APPLICANT:
APPLICANT:
                                                                                                                                                                            APPLICANT: CLEMENTS, Peter R.
APPLICANT: MORRIS, Charles P.
APPLICANT: HOPWOOD, John J.
TITLE OF INVENTION: SYNTHETIC ALPHA-L-IDURONIDASE AND GENETIC
TITLE OF INVENTION: SEQUENCES ENCODING SAME
NUMBER OF SEQUENCES: 7
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: SCULLY SCOTT MURPHY & PRESSER
STREET: 400 Garden City Plaza
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FILING DATE: 23-JUN-
APPLICATION NUMBER:
FILING DATE: 14-NOV-
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TOPOLOGY: li
                                                                              CITY: Garden City
STATE: New York
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TYPE: nucleic acid
                                                             COUNTRY:
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                                         11530
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                                                                                                                                                                                                                                                                                                 ORSBORN, Annette M. NELSON, Paul V.
                                                                                                                                                                                                                                                                                                                                        ANSON, Donald S.
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40.58%
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Matches:
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Best Local Similarity:
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                                         Pred. No.:
                                                             Alignment Scores:
  Percent Similarity:
                                                                                                         US-09-439-923-1
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TELEX: 230 901 SANS UR
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 4480 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/439,923
CURRENT FILING DATE: 1999-11-12
NUMBER OF SEQ ID NOS: 2
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 1
LENGTH: 6200
                                                                                                                                                                                                                                                                                                                                                    Sequence 1, Application US/09439923

Sequence 1, Application US/09439923

Patent No. 6428208

GENERAL INFORMATION:

APPLICANT: Emil D. Kakkis

APPLICANT: Becky Tanamachi

TITLE OF INVENTION: Recombinant Alpha-L-Iduronidase, Methods

TITLE OF INVENTION: for Producing and Purifying the Same and

TITLE OF INVENTION: Treating Diseases Caused by Deficiencies

FILE REFERENCE: 080000510500
                                                                                                                                                                TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                        NAME/KEY: CDS
LOCATION: (1558)...(3516)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 31,346
REFERENCE/DOCKET NUMBER: 89:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 516-742-4343
TELEPAX: 516-742-4366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/385,707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: DIGIGILIO, Frank S.
REGISTRATION NUMBER: 31,
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APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS: single TOPOLOGY: linear
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62.50
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62.50
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Matches:
  Matches:
Conservative:
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Thereof
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US-09-711-205A-1/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nery Match:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Emil D. Kakkis
APPLICANT: Emil D. Kakkis
APPLICANT: Emil D. Kakkis
APPLICANT: Becky Tanamachi
TITLE OF INVENTION: Recombinant Alpha-L-Iduronidase, Methods
TITLE OF INVENTION: Treating Diseases Caused by Deficiencies Thereof
FILE REFERENCE: 0800051US00
FILE REFERENCE: 0800051US00
CURRENT APPLICATION NUMBER: US/09/711,202A
CURRENT PILING DATE: 2000-11-09
PRIOR APPLICATION UNMBER: US/09/439,923
PRIOR FILING DATE: 1999-11-12
NUMBER OF SEQ ID NOS: 2
NUMBER OF SEQ ID NOS: 2
                                                                                                                                                                                                                                    Sequence 1, Application Patent No. 6585971 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/09711202A
Patent No. 6569661
APPLICANT: Emil D. Kakkis
APPLICANT: Becky Tanamachi
TITLE OF INVENTION: Recombinant Alpha-L-Iduronidase, Methods
TITLE OF INVENTION: For Producing and Purifying the Same and Methods for
TITLE OF INVENTION: Treating Diseases Caused by Deficiencies Thereof
FILE REFERENCE: 08000051US00
CURRENT APPLICATION NUMBER: US/09/711,205A
CURRENT FILING DATE: 2000-11-09
PRIOR APPLICATION NUMBER: US/09/439,923
PRIOR FILING DATE: 1999-11-12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE: NAME/KEY: CDS
LOCATION: (1558)...(3516)
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LOCATION: (1558)...(3516)
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TYPE: DNA
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                                                                                                                                                                                                                            COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: PATENTIN RELEASE #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/639,696C
FILING DATE: 16-Aug-2000
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
FILING DATE: 07-JUL-1993 ATTORNEY/AGENT INFORMATION:
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ADDRESSEE: NIXON PEABODY LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HOPWOOD, John J.
TITLE OF INVENTION: SYNTHETIC ALPHA-L-IDURONIDASE AND GENETIC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
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                                                       APPLICATION NUMBER: US 09/191,171
FILING DATE: 13.NOV-1998
APPLICATION NUMBER: US 08/494,104
FILING DATE: 23.JUN-1995
APPLICATION NUMBER: AU PK9490/91
FILING DATE: 14-NOV-1991
APPLICATION NUMBER: AU PCT/AU92/00611
FILING DATE: 12-NOV-1992
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 990 Stewart Avenue
                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 11530
                                     APPLICATION NUMBER: US 08/084,254
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NELSON, Paul V.
CLEMENTS, Peter R.
MORRIS, Charles P.
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Donald S.
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US-09-676-610B-24/c
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                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/676,610B
CURRENT FILING DATE: 2000-09-29
NUMBER OF SEQ ID NOS: 182
SEQ ID NO 24
LENGTH: 169998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: C. Frank Bennett
APPLICANT: Jacqueline Wyatt
APPLICANT: Susan M. Freier
TITLE OF INVENTION: OLIGONUCLEOTIDE INHIBITION OF HER-1 EXPRESSION
FILE REFERENCE: RTS-0138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 24, Application US/09676610B
Patent No. 6444465
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LOCATION:
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NAME/KEY:
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                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
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REFERENCE/DOCKET NUMBER: 2249/304
TELECOMMUNICATION INFORMATION:
TELEPHONE: 516-832-7572
TELEFAX: 516-832-7555
INFORMATION FOR SEQ ID NO: 6:
                                                                                 NAME/KEY:
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SEQUENCE DESCRIPTION: SEQ ID NO:
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LENGTH: 6238 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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21 LeuTrpLeuAlaValValProGly 28

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MetargargGlyAlaclyAlalaargGlyArgAlaSerTrpCysTrpAlaLeuAlaLeu 20

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Percent Similarity:
Best Local Similarity:
Query Match:
                     DB:
US-10-010-050A-2_COPY_1_28 (1-28) x US-09-676-610B-24 (1-169998)
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                                                                      Pred. No.:
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US-09-621-976-11459/c
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                                                      US-10-010-050A-2_COPY_1_28 (1-28) x US-09-621-976-11459 (1-365)
                                                                                                                                                                                                           Alignment Scores:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: K. Danenberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 11459, Application US/09621976 Patent No. 6639063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 10, Application Patent No. 6582919
                                                                                                                                                                                                                                                                                                     SEQ ID NO 11459
LENGTH: 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Method of determining Epidermal Growth
TITLE OF INVENTION: Factor Receptor and HE22-Neu Gene Expression
TITLE OF INVENTION: and Correlation of Levels Thereof With Survival
FILE REFERENCE: 11220/120
CURRENT FAPLICATION NUMBER: US/09/877,177A
CURRENT FILLING DATE: 2001-06-11
NUMBER OF SEQ ID NOS: 11
                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Dumas Milne Edwards, J.B.
APPLICANT: Jobert, S.
APPLICANT: Giordano, J.Y.
TITLE OF INVENTION: ESTS and Encoded Human Proteins.
FILE REFERENCE: GENSET.054PR2
CURRENT APPLICATION NUMBER: US/09/621,976
CURRENT FILING DATE: 2000-07-21
                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 19335
SOFTWARE: Patent.pm
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ORGANISM: Homo sapiens
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; TYPE: DNA
; ORGANISM: Homo s
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Patent No. 6610836
GENERAL INFORMATION:
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SEQ ID NO 2986
LENGTH: 657
TYPE: DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 2
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APPLICANT: Inohara, Naohiro
APPLICANT: Inohara, Naohiro
APPLICANT: Koseki, Takeyoshi
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR IDENTIFYING APOPTOSIS
TITLE OF INVENTION: SIGNALING PATHWAY INHIBITORS AND ACTIVATORS
FILE REPERENCE: UM-03333
CURRENT APPLICATION NUMBER: US/09/069,023A
CURRENT FILING DATE: 1998-04-27
NUMBER OF SEQ ID NOS: 38
                                                                                                                                                                                                                                                       APPLICANT: Gary Breton et. al
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING
TITLE OF INVENTION: NUMMONIAE FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 2709.2004001
CURRENT APPLICATION NUMBER: US/09/489,039A
CURRENT FILING DATE: 2000-01-27
PRIOR APPLICATION NUMBER: US 60/117,747
PRIOR FILING DATE: 1999-01-29
PRIOR FILING DATE: 1999-01-29
                                                                                                                                                                 ORGANISM: Klebsiella pneumoniae
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Command line parameters:

\[ \text{MODELEframe+ p2n.model - DEV=xlh} \]

\[ \text{Q=/cgn2_1/USPTO_spool/USI0010050/runat 22042004 113203 27539/app_query.fasta_1.1372} \]

\[ \text{Q=/cgn2_1/USPTO_spool/USI0010050/runat 22042004 113203 27539/app_query.fasta_1.1372} \]

\[ \text{D=N} \]

\[ \text{Geneseq 29Jan04 - \text{QFMT=fastap - SUFFIX=rug - MINMATCH=0.1 - LOOPCL=0} \]

\[ \text{LIST=0 - UNITS=bits - START=1 - END=-1 - MATRIX=blosum62 - TRANS=human40.cdi} \]

\[ \text{LIST=45 - DOCALIGN=200 - THR SCORE=pct - THR MAX=100 - THR MIN-0 - ALIGN=15 - MODE=LOCAL - OUTFMT=pto - NORM=ext - HEAPSIZE=500 - MINLEN=0 - MAXIEN=2000000000 \]

\[ \text{USER=US10010050 gCCN 1 1 819 gerunat 22042004 113203 27539 - NCPU=6 - ICPU=3 \]

\[ \text{NO MMAP - LARGEQUERY - NEG SCORES=0 - WAIT - DSPELOCK=100 - LONGLOG \]

\[ \text{DEV TIMEOUT=120 - WARN TIMEOUT=30 - THREADS=1 - XGAPOP=10 - XGAPEXT=0.5 - FGAPOP=6 \]

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ALIGNMENTS

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08-JUL-1999; 99JP-00194486
11-JAN-2000; 2000JP-00118774
02-MAY-2000; 2000JP-00183765
                                                                                                                                                                                                                                                                                                   Human; full length cDNA; cDNA synthesis; oligo-capping; ss
                                                                                                 07-JUL-2000; 2000EP-00114089
                                                                                                                                                      05-SEP-2001.
                                                                                                                                                                                                      EP1130094-A2
                                                                                                                                                                                                                                                      Homo sapiens
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830 Primers useful for synthesizing full length cDNA clones and their use

WPI; 2001-524255/58.

Ota T,

Nishikawa T, I su A, Sugiyama

Isogai T, Hayashi K, wa T, Nagai K, Kojima

ŝ Ishii S, Otsuki

Kawai T, Ko ĸ (HELI-) HELIX RES INST.

in genetic manipulation

11; SEQ

ID NO 1884; 1380pp + Sequence Listing; English.

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RESULT 2
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   Claim 2;
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11-JAN-2000;
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                                     830 Primers useful for synthesizing full length
                                                              WPI; 2001-524255/58.
                                                                                        Wakamatsu
                                                                                                                                                     02-MAY-2000;
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                                                                                                                                                                                                                                                                                                  Human; full length cDNA; cDNA synthesis; oligo-capping; ss
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                         in genetic manipulation
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su A, Sugiyama
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New secreted polypeptide, zsig46, and its fragments,

related fusion

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RESULT 3
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                                        WPI; 1999-142930/12.
P-PSDB; AAW92967.
                                                                                                             Sheppard
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Secreted protein; zsig46; human; chromosome 13; thyroid; disease hypothyroidism; Graves; disease; thyrotoxicosis; thyroid cancer; Hirschsprung's disease; neuronal ceroid-lipofucinosis; Wilson di Reiger syndrome; immunoassay; detection; anti-idiotypic antibody
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nat directly from EPO
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Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                      Human; secreted protein; fusion protein; gene therapy; protein therapy; diagnosis; tissue; cancer; tumour; neurodegenerative disorder; leukaemia; developmental abnormality; foetal deficiency; blood; allergy; renal; ds; immune system; asthma; lymphocytic disease; brain; hepatic; lymphoma; inflammation; ischaemic shock; Alzheimer's disease; restenosis; AIDS;
                                                                                                                                                                                                                                                                                                                                                                     cognitive disorder; schizophrenia; prostate; obesity; osteoclast; thymus; osteoporosis; arthritis; testis; lung; thyroiditis; thyroid; digestion;
                              19-MAR-1998;
19-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                endocrine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 syndrome). Antibodies and other binding proteins, are used as immunoassay reagents to detect zsig46 or cells expressing it, e.g. for assessing thyroid function to produce anti-idiotypic antibodies, for affinity purification of zsig46, to screen expression libraries, to neutralise zsig46 activity, and to deliver toxins, radioisotopes etc. for therapeutic or diagnostic purposes. Agonists of the product can be used to promote growth, differentiation and proliferation of specific cell types, e.g. for treating (extra)thyroid diseases or as additive to cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This invention describes the isolation of a novel human secreted protein, zsiy46 encoded by a gene on chromosome 13 which is mainly expressed in the thyroid. This product can be used to study secretion of proteins from cells and also to treat or prevent deficient expression of zsiy46, which may be associated with thyroid diseases (e.g. hypothyroidism, Graves' disease, thyrotoxicosis, thyroid cancer etc.) or with diseases that involve genes in the same region of chromosome 13 (e.g. Hirschsprung's disease, neuronal ceroid-lipofucinosis, Wilson disease and Reiger
                                                                                                                                                                            23-SEP-1999.
                                                                                                                                                                                                                                      WO9947540-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human secreted protein gene 16 clone HMZAD77.
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                                                                                                                                                                                                                                                                                                                                                metabolism;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    used for diagnosis and treatment
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98US-0078563P.
98US-0078566P.
98US-0078573P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This sequence represents a nucleic acid molecule which encodes a secreted human protein. The gene number, and the clone it is derived from, are detailed in the descriptor line. The gene can be used to generate fusion proteins by linking to the gene to a human immunoglobulin Fc portion (e.g. AAZ24802) for increasing the stability of the fused protein as compared to the human protein only. The invention relates to 95 novel genes and their fragments (nucleic acid sequences: AAZ24811-Z24907; amino acid sequences AAY41308-Y41404) which are useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. Also, pathological conditions can be diagnosed by determining the amount of the new polypeptides in a sample or by determining the presence of mutations in the new polynucleotides. Specific uses are described for each of the polynucleotides, based on which tissues they are most highly expressed in a sample or by determining the amount of the polynucleotides, based on which tissues they are most highly expressed in the control of the sample or by determining the amount of the polynucleotides, based on which tissues they are most highly expressed in the control of the sample or by determining the amount of the polynucleotides, based on which tissues they are most highly expressed in the control of the sample or by determining the amount of the sample or by determining the presence of mutations in the new polynucleotides, based on which tissues they are most highly expressed in the presence of mutations in the new polynucleotides.
                         Human; full length cDNA; cDNA synthesis; oligo-capping; ss.
                                                            Human full-length cDNA, SEQ ID NO: 3977.
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19-MAR-1998;
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                                                                                                                                                                      AAK94829 standard; cDNA;
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19-MAR-1998;
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Endress GA,
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                                                                                                 (first entry)
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Lafleur DW, Ols;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clones. 830 cDNA molecules encoding a human protein have been isolated and nucleotide sequences of 5'- and 3'-ends of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cINA libraries that were synthesised by the oligo-capping method. The primers enable the production of the full length cDNA esaily without any special methods. The present sequence is a full length human cDNA of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in CD-ROM format directly from EPO
                               drug; side effect; cancer; central nervous system; cardiovascular; gastrointestinal; respiratory system; single nucleotide polymorphism; SNP; cell differentiation; ds.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     830 Primers useful for synthesizing full length cDNA clones and their use
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11-JAN-2000; 2000JP-00118774.
02-MAY-2000; 2000JP-00183765.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to primers for synthesising full length
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                                                                      Human; cytosine methylation; 5'-CpG-3'; uracil; cytosine; diagnosis;
                                                                                                      Oligonucleotide for detecting cytosine methylation SEQ ID NO 27244.
                                                                                                                                       12-JUL-2002
                                                                                                                                                                   ABQ40653
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K, Kojima
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                                                                                                                                                                                                                                                                                                  This invention describes a novel method for determining the degree of methylation of a particular cytosine in a motif 5'-CyG-3', present in a genomic sample of DNA. The sample is treated chemically to convert cytosine (C) but not methylated C, to uracil, then part of the genomic DNA that contains the target C is amplified to form a labeled amplicon. The amplicon is hybridised to two classes, each with at least one member, of oligonucleotides and/or peptide-nucleic acid (PNA) oligomers and the degree of hybridisation to both classes is determined from the label on the amplicon. From the ratio of labels hybridised to the two classes of oligomers, the degree of methylation is calculated. The method is used:

(i) for diagnosis and/or prognosis of side effects of therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders of the central nervous, cardiovascular, gastrointestinal and respiratory systems etc.,
                                                                                        . No.:
                                                                                                                                                                                            particularly by detecting mutations or single nucleotide polymorphisms (SNP'8); and (ii) for differentiation of cell or tissue types and for investigating cell differentiation. The method allows the methylation status of many C residues to be determined simultaneously. ABQ19410-ABQ54121 represent genomic DNA sequences used to illustrate the method for determining the degree of cytosine methylation described in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Determining the degree of cytosine methylation in genomic DNA, useful for diagnosis and prognosis, comprises selective hybridization of amplicons from chemically treated DNA.
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                                                                                                                                           Sequence 630 BP; 219 A; 255
                                                                                                                                                                                 disclosure of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 12; 56pp + Sequence Listing; 56pp; German.
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05-SEP-2000;
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2000DE-01044543.
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US-10-010-050A-2_COPY_1_28 (1-28) x ABQ40653 (1-630)

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                                                                    ATGCGGCGGGCGCGCGCTTCGGGGACGCGTTTTTTGGTGTTTGGCGTTTTGGCGTTG
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RESULT 7
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AC ABQ4
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ABQ40652 standard; DNA; 630

ABQ40652;

12-JUL-2002 (first entry)

4

Oligonucleotide for detecting cytosine methylation SEQ ID NO 27243.

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ABQ13702
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cc methylation of a particular cytosine in a motif 5 ccp-3, present in a cytosine (c) but not methylated C, to uracil, then part of the genomic Cytosine (c) but not methylated C, to uracil, then part of the genomic CC DNA that contains the target C is amplified to form a labeled amplicon. CC The amplicon is hybridised to two classes, each with at least one member, CC of oligonuclectides and/or peptide-nucleic acid (PNA) oligomers and the CC degree of hybridisation to both classes is determined from the label on the amplicon. From the ratio of labels hybridised to the two classes of CC oligomers, the degree of methylation is calculated. The method is used: CC (i) for diagnosis and/or prognosis of side effects of therapeutic drugs CC and of a wide range of diseases, e.g. cancer, disorders of the central CC nervous, cardiovascular, gastrointestinal and respiratory systems etc., CC particularly by detecting mutations or single nucleotide polymorphisms CC (SNP's); and (ii) for differentiation of cell or tissue types and for convestigating cell differentiation. The method allows the methylation convention of many C residues to be determined simultaneously. ABC13410-
                     ABQ13702 standard; DNA; 631
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05-SEP-2000; 2000DE-01044543
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충 음 **충**

LeuTrpLeuAlaValValProGly 28

209

Best Local Similarity: Query Match: DB:

Pred. No.: Score:

Percent Similarity:

3.68e-05 120.00 75.00% 75.00% 77.92%

> Length: Matches:

Conservative: Mismatches: Indels:

US-10-010-050A-2_COPY_1_28 (1-28) x ABQ13702 (1-631)

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Alignment Scores:
                                                           This invention describes a novel method for determining the degree of CC methylation of a particular cytosine in a motif 5'-CpG-3', present in a CC genomic sample of DNA. The sample is treated chemically to convert CC DNA that contains the target C is amplified to form a labeled amplicon. CC The amplicon is hybridised to two classes, each with at least one member, CC degree of hybridisation to both classes, each with at least one member, CC degree of hybridisation to both classes is determined from the label on CC cligomers, the degree of methylation is calculated. The method is used: CC oligomers, the degree of methylation is calculated. The method is used: CC (i) for diagnosis and/or prognosis of side effects of therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders of the central CC nervous, cardiovascular, gastrointestinal and respiratory systems etc., particularly by detecting mutations or single nucleotide polymorphisms CC (SNP's); and (ii) for differentiation of cell or tissue types and for investigating cell differentiation. The method allows the methylation CC hapcatlar represent genomic DNA sequences used to illustrate the method CC disclosure of the invention
                                Sequence 631
                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 12; 56pp + Sequence Listing; 56pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  diagnosis and prognosis, comfrom chemically treated DNA.
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05-SEP-2000;
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2000DE-01044543
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selective hybridization of amplicons
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TTTTGGTTCGCGGTGGTTTCGGGT 292

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Percent Similarity:
Best Local Similarity:
Query Match:
DB:
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ABQ13703/c
                                                                                                                                                                          methylation of a particular cytosine in a motif %'-Cg-3', present in a Cg genomic sample of DNA. The sample is treated chemically to convert Cytosine (C) but not methylated C, to uracil, then part of the genomic Cytosine (C) but not methylated C, to uracil, then part of the genomic CY The amplicon is hybridised to two classes, each with at least one member, CY of oligonucleotides and/or peptide-nucleic acid (PNA) oligomers and the CY degree of hybridisation to both classes is determined from the label on the amplicon. From the ratio of labels hybridised to the two classes of coligomers, the degree of methylation is calculated. The method is used: CY oligomers, the degree of methylation is calculated. The method is used: CY oligomers, the degree of diseases, e.g. cancer, disorders of the central cytosus, cardiovascular, gastrointestinal and respiratory systems etc. CY and of a wide range of diseases, e.g. cancer, disorders of the central cyarticularly by detecting mutations or single nucleotide polymorphisms (SNP's); and (ii) for differentiation of cell or tissue types and for investigating cell differentiation. The method allows the methylation cyality of many C residues to be determined simultaneously. ABQ13410-CY abQ54121 represent genomic DNA sequences used to illustrate the method of cisclosure of the invention
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05-SEP-2000; 2000DE-01044543.
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US-10-010-050A-2_COPY_1_28 (1-28) x ABQ13703 (1-631)

Best Local : Query Match

Similarity:

0.00277 106.00 67.86% 67.86% 68.83%

Length: Matches:

Mismatches: Indels: Conservative:

1038 19 0

Percent Similarity:

Alignment

Мо.:

Sequence 1038

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398 Other

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RESULT 10
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                                                                                                This invention describes the isolation of a novel human secreted protein, compared and the product can be used to study secretion of proteins from the thyroid. This product can be used to study secretion of proteins from compared to the thyroid. This product can be used to study secretion of proteins from compared the thyroid. This product deficient expression of zsig46, which may be associated with thyroid diseases (e.g. hypothyroidism, Graves' disease, thyrotoxicosis, thyroid cancer etc.) or with diseases that involve genes in the same region of chromosome 13 (e.g. Hirschaprung's compared to the product and the production of the same and Reiger syndrome). Antibodies and other binding proteins, are used as immunoassay creagents to detect zsig46 or cells expressing it, e.g. for assessing thyroid function to produce anti-idiotypic antibodies, for affinity purification of zsig46, to screen expression libraries, to neutralise zsig46 activity, and to deliver toxins, radioisotopes etc. for therapeutic or diagnostic purposes. Agoniats of the product can be used to promote growth, differentiation and proliferation of specific cell types, e.g. for treating (extra)thyroid diseases or as additive to cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New secreted polypeptide, zsig46, and its fragments, related fusion proteins - used for diagnosis and treatment of thyroid disorders or
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 31; Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diseases involving genes on chromosome
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                                                                                 polynucleotides comprising a nucleotide sequence encoding a protein which is involved in or associated with the synthesis, metabolism or degradation of carbohydrates in the plant grain and the expression of which is up-regulated during grain filling. The plant is selected from corn, tomato, banana, canola, cotton, peanut, sorghum, tobacco, sugarbeet, wheat, and rice. The invention may be useful for the improvement of protein, oil, starch, fibre and moisture content of the cereal grains. In addition, carbohydrate levels may be modified to a more desirable level using the present invention. The present sequence is a DNA sequence encoding a rice protein of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New plant genes encoding polypeptides having an activity involved in or associated with the synthesis, metabolism or degradation of carbohydrates in the plant grain useful in generating plants having improved
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Glazebrook J,
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26-SEP-2001; 2001US-0325277P.
20-DEC-2001; 2001US-0342327P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               plant biotechnology; carbohydrate synthesis; carbohydrate metabolism;
                                                              ftp.wipo.int/pub/publishedpct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           This invention,
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The specification describes antisense oligonucleotides (AAX52869-X55271) directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX5572-74. These multiple target oligonucleotides (specifically AAX55180-271) can be used for the antisense treatment of diseases and conditions. Typical diseases and conditions are those associated with impaired respiration and inflammation, including lung diseases, pulmonary vasoconstriction, inflammation, allergic rinitis, acute asthma, allergies, asthma, impeded respiration, respiratory hypertension,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 60; 120pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vasoconstriction.
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09-JUN-1998;
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oligonucleotide (ON) with low adenosine (up to 15%), which to nucleic acids involved in bronchoconstriction, allergies, and inflammation. The ON can have antiinflammatory, antiallergic
                                                                                                                                        New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension,
                                                                                                                                                                                                                                                                                                                                                                                                                                                          phosphorothioate; impaired respiration; inflammation; allergy; allergy; disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic; antiasthmatic; cytostation analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pulmonary vasoconstriction, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukentas, lymphomas, carcinomas e.colon cancer, breast cancer, lung cancer, pancreatic cancer, hepatic metastases, hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, well as all types of cancers which may metastasize or have metastasized
                                                                               Disclosure; Page 504-505; 1343pp; English
                                                                                                                             bronchitis, emphysema,
                                                                                                                                                                                         WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                       03-AUG-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; adenosine receptor; low adenosine antisense oligonucleotide;
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                                               present invention describes a new composition comprising an antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    260 CCGGTTGCCCCG 271
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                                                                                                                             respiratory distress
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                         surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                    immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human; airway disorder; bronchoconstriction; lung inflammation;
surfactant depletion; respiratory; bronchodilator; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-MAR-2001
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                                                                                                                                       26-OCT-2000.
                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Low adenosine antisense oligonucleotide; phosphorothicate; allergy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human endothelial nitric oxide synthase polynucleotide fragment #1905
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06-APR-1999;

24-MAR-2000; 2000WO-US008020.

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                                                                                                                                                                                                                                                                       ESULT 15
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Human endothelial nitric oxide synthase antisense fragment no.1892.
                                                                            17-0CT-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base.

(I) can have respiratory, bronchodilator. Antisfiammeter.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitts, and/or cancer. AAF18434 to AAF21543 represent human polymuclectide fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors,
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    can have respiratory, bronchodilator, antiinflammatory, analgesic,
immunosuppressive, antiasthmatic, hypotensive and cytostatic activitie

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Nyce JW,
Miller S,
                                                                                                                                                                                                                                                                        first active agent comprising an oligonucleotide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory; steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; bypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory; lung; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy;
                                                                                                                                                                                                                                                                                                                                                 Disclosure; SEQ ID NO 11274; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                           Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-APR-2001; 2001US-0286137P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-APR-2002; 2002WO-US013135
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                                                                                                                                                                                                                                                                                                                    The invention relates to a novel pharmaceutical composition, which has
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             inflammation;
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, Tang L,
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L, Shahabuddin
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junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or the composition of the prophylactic or the steroid prophylactic prophyl lung inflammation, lung allergies, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences

Sequence 2028 BP; 8 A; 740 C; 792 G; 484 T; 0 U; 4 Other;

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260 CCGGTTGCCCCG

Search completed: April 24, 2004, 23:26:32 Job time: 55.6833 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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'command line parameters:
'MODEL=frame+ p2n.model -DEV=xlh
'MODEL=frame+ p2n.model -DEV=xlh
'O=/cgn2_1/USPTO_Spool/US10010050/runat_22042004_113204_27556/app_query.fasts_1.1372
'DB=EST -QFMT=fastap -SUPFIX=rst -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
'UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=buman40.cdi -LIST=45
'DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
'OUTFMT=pto -NORM=est -HBASIZE=500 -MINLEN=0 -MAXLEN=2000000000
USER=US10010050 @CGN 1_1 6283 @runat 22042004 113204 27556 -NCPU=6 -ICPU=3
'NO MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
'NO MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
'DEV TIMEOUT=120 -MARN TIMEOUT=30 -THREADS=1 -XGAPEXT=0.5 -FGAPOP=6
'DELEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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29: gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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ALIGNMENTS

	ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION		DEFINITION	Locus	AL546472	RESULT 1
No. of the last of	Homo sapiens	Homo sapiens (human)	EST.	AL546472.2 GI:31268306	AL546472	ODIO3	AL546472 Homo sapiens PLACENT	AL546472 1201		

p mRNA linear BST 31-MAY-200: COT 25-NORMALIZED Homo sapiens cDNA NA sequence.

EST 31-MAY-2003

REFERENCE Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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cgi-bin/cluster.cgi?seq=CSODIO3OCEO1QP1&cluster=7238.f. Contact
Feng Liang Email: fliang@lifetech.com URL:
http://fulllength.invitrogen.com/ InvitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID: CSODIO3OCEO1QP1.
Location/Qualifiers
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Email: segref@genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238.f For
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Full-length cDNA libraries
Unpublished (2001)
On Feb 15, 2001 this sequer
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/clone_lib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/note="1st strand cDNA was primed with a NotI-oligo(dI)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR i
sites of the pCMVSPORT 6 vector. Library was normalized
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/db_xref="taxon:9606"
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Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sabaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Yujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y., RIKEN integrated sequence analysis (RISA) system—384-format
                                                                                                                                                                                                                                                                                                                                                                                                                            Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y., Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new Genome Res. 10 (10), 1617-1630 (2000)
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AKO4526 bp mRNA linear HTC 19-SEP-2003
Mus musculus 7 days neonate cerebellum cDNA, RIKEN full-length
enriched library, clone:A730075N08 product:similar to
CEROID-LIPOFUSCINOSIS NEURONAL PROTEIN 5 (CLNS PROTEIN) [Homo
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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HTC; CAP trapper.
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High-efficiency full-length cDNA
Meth. Enzymol. 303, 19-44 (1999)
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Please visit our web site for further URL:http://genome.gsc.riken.go.jp/
URL:http://fantom.gsc.riken.go.jp/.
Location/Qualifiers
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MetArgArgGlyAlaGlyAlaAlaArgGlyArgAlaSerTrp----
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18 6 (bases 1 to 2433)

19 6 (bases 1 to 2433)

19 8 Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, F., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Fukuda, S., Furuno, M., Hanagaki, T., Hiraoka, T., Hirozane, T., Hayashida, K., Hayatsu, N., Hiramoto, K., Hiraoka, T., Kasukawa, T., Kocho, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Saito, R., Saitoh, H., Sakai, K., Sakazıme, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagami, M., Tagawa, A., Shinagawa, A., Shiraki, T., Takaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M., and Hayashizaki, Y.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new g Genome Res. 10 (10), 1617-1630 (2000)
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High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
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Analysis of the mouse transcriptome based on
of 60,770 full-length cDNAs
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cDNA library was prepared and sequenced in Mouse Genome
Encyclopedia Project of Genome Exploration Research Group in Riken
Genomic Sciences Center and Genome Science Laboratory in RIKEN.
                                                              Submitted (16-APR-2002) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-resegec.riken.go.jp, Kanagawa 230-9045, Japan (E-mail:genome-resegec.riken.go.jp, URL-http://genome.gc.gc.riken.go.jp/, Tel:B1-45-503-9222, Fax:81-45-503-9216)
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Mammalia; Eutheria;
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Sciurognathi; Muridae;
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Please visit our web site for further details.
URL:http://genome.gsc.riken.go.jp/.
URL:http://fantom.gsc.riken.go.jp/.
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MetPheAsnGlnMetAlaLysTrpValLysGlnAspAsnGluThrGlyIleTyrTyrGlu
                                                                                                                       AspAspValHisTrpLysGluAsnGlyThrLeuValGlnValAlaThrIleSerGlyAsn
                                                                                                                                                                          CCTGACAAGAGCGCTCCCTTCTGGTGTAACCAAGGGGGCAGCCT
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                                                                                    GATGATAAACACTGGAAGGAAAACGGGACACTGTCAGTCGTTGCAACCATATCCGGAAAC
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/mol_type="mRNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="similar to CEROID-LIPOFUSCINOSIS NEURONAL (CLNS PROTEIN) [Homo sapiens] (SWISSPROT|075503, FASTY, 73.9%ID, 86.7%length, match=1041)"
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/clone_lib="RIKEN full-length enriched mouse cDNA library"
/dev_stage="10 days lactation, adult"
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/db_xref="MGI:2422937"
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Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishia, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y., RIKEN integrated sequence analysis (RISA) system-384 format sequencing pipeline with 384 multicapillary sequencer Genome, Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AK032293 2247 bp mRNA linear HTC 18-SEP-:
Mus musculus adult male olfactory brain cDNA, RIKEN full-length
enriched library, clone:6430516F20 product:similar to
CEROID-LIPOFUSCINOSIS NEURONAL PROTEIN 5 (CLN5 PROTEIN) [Homo
                                                                                                                                                                                                                                                                                                                                Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Komno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Carninci,P. and Hayashizaki,Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Adachi, I., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P. Pukuda, S., Furumo, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozane, T., Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T., Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Kondo, S., Konno, H., Kouda, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Okazaki, Y., Saito, R., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M., and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA library was prepared and sequenced in Mouse Genome
Encyclopedia Project of Genome Exploration Research Group in Ri
Genomic Sciences Center and Genome Science Laboratory in RIKEN
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Analysis of the mouse transcriptome of 60,770 full-length cDNAs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               prepare mouse tissues.
Please visit our web site for further details.
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6 (bases 1 to 2247)
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                                                                                                                                                                                                                                                                                                                                PROTEIN) [Homo magiens] (SWISSPROT[075503, FASTY, 73.9%ID, 86.7%length, match=1041)"
                                                                                                                            /codon_start=3
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EWVKQDNETGIYYETWTVRAGFGQGAQTWFESYDCSNFVLRTYKKLAEFGTEFKKIET
NYTKIFLYSGEPIYLGNETSIFGFKGNKTLALAIKKFYGFFRFYLSTKDFLMNFLKIF
                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="unnamed protein product; ]
similar to CEROID-LIPOFUSCINOSIS
DTVIIHRQFYLFYNFEYWFLPMKPPFVKITYEETPLPTRHTTFTDL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /dev_stage="adult"
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/clone_lib="RIKEN full-length enriched mouse
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/db_xref="MGI:2395762"
/db_xref="taxon:10000"
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/strain="C57BL/6J"
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US-10-010-050A-2 (1-346) x BX331615
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http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq=CSODB009AB01QP1&cluster=7238.f. Contact
Feng Liang Email : fliang@lifetech.com URL :
Feng Liang Email : fliang@lifetech.com URL :
http://fulllength.invitrogen.com/ InvitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSODB009AB01QP1.
Location/Qualifiers
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Mammalia; Eutheria;
1 (bases 1 to 923)
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BX331615 Homo sapiens NEUROBLASTOMA COT 10-NORMALIZED Homo CONA Clone CSODB009YC01 5-PRIME, mRNA sequence.
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Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238.f For
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/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CS0DB009YC01"
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CA488543
CA488543.1 GI:
                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Kristi A. Egland, Ira Pastan
cDNA Library Preparation: Invitrogen Corp
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can l
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 924)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
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AGENCOURT 10808884 MAPCL mRNA sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens
               /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="texon:9606"
/clone="rMAGE:6720309"
/cell line="ZR-75-1, MCF7, ShTERT-HME1, LNCap"
                                                                                                                                           Location/Qualifiers
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host="EMDH10B"
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/clone_lib="MAPCL"
/note="Vector: pCMV-SPORT6; Site_1: EcoRV; Site_2: Not I;
Subtracted with brain, liver, lung, kidney and muscle.
Directionally cloned. Priming method: oligo-dT. Average
insert size: 1800 bp. Library amplification: 26,000 fold.
Kristi A. Egland, James J. Vincent, Robert Strausberg,
Bungkook Lee & Irra Pastan: Discovery of new breast
cancer genes encoding membrane and secreted proteins.
Manuscript submitted."

Pred. No.: Score: Score: Score: Similarity Best Local Similar Query Match:	3.17e-129 Length: 924 3.186.50 Matches: 258 milarity: 88.63% Conservative: 7 Similarity: 86.29% Mismatches: 21 h: 71.95% Indels: 13 14 Gaps: 3
US-10-010-	050A-2 (1-346) x CA488543 (1-924)
₽ 8	1 MetArgArgGlyAlaGlyAlaAlaArgGlyArgAlaSerTrpCysTrpAlaLeuAlaLeu 20
QY Db	21 LeuTrpLeuAlaValValProGlyTrpSerArgValSerGlyTleProSerArgArgHis 40
8	41 TrpProValProTyrLysArgPheAspPheAspProLysProAspProTyrCysGlnAla 60
Db	136 TGGCCGGTGCCCTACAAGCGTTTTGACTTCCGTCCAAAACCTGATCCTTATTGTCAAGCT 195
QY	61 LysTyrThrPheCysProThrGlySerProIleProValMetGluGlyAspAspAspIle 80
Db	196 AAGTATACTTTCTGTCCAACTGGCTCACCTATCCCAGTTATGGAGGGTGATGATGACATT 255
γQ	81 GluValPheArgLeuGlnAlaProValTrpGluBheLyBTyrGlyAspLeuLeuGlyHis 100
Dβ	256 GAAGTTTTTCGATTACAAGCCCCAGTATGGGAATTTAAATATGGAGACCTCCTGGGACAC 315
γQ	101 LeuLysIleMetHisAspAlaIleGlyPheArgSerThrLeuThrGlyLysAsnTyrThr 120
В	316 TIGAAAATTATGCATGATGCCATTGGATTCAGAAGTACATTAACTGGCAAGAACTACACA 375
8	121 MetGluTrpTyrGluLeuPheGlnLeuGlyAsnCysThrPheProHisLeuArgProGlu 140
Db	376 AIGGAATGGTATGAACTTTCCAACTTGGCAACTGTACATTTCCCCATCTCCGACCTGAA 435
γ	141 MetAspAlaProPheTrpCysAsnGlnGlyAlaAlaCysPhePheGluGlyIleAspAsp 160
DЪ	436 ATGGATGCCCCTTTCTGGTGAATCAAGGCGCTGCCTTTTTTTGAGGGAATTGATGAT 495
Qy	161 ValHisTrpLysGluAsnGlyThrLeuValGlnValAlaThrIleSerGlyAsnMetPhe 180
DЬ	496 GTTCACTGGAAGGAAAATGGGACATTAGTTCAAGTAGCAACTATATCAGGAAACATGTTC 555
Qy	181 AsnGlnMetAlaLysTrpValLysGlnAspAsnGluThrGlyIleTyrTyrGluThrTrp 200
DЬ	556 AACCAAATGGCAAAGTGGGTGAAAACAGGACATGAAACAGGAATTTATTATGAGACATGG 615
Qy	201 AsnVallysAlaSerProGluLysGlyAlaGluThrTrpPheAspSerTyrAspCysSer 220
дb	616 AATGTAAAAGCCAGCCCAGAAAAGGGGGCAGAGACATGGTTTGATTTCCTACGACTGTTCC 675
Qy	PheValLeuArgThrPheAsnLysLeuAlaGluPheGlyAlaGluPheLysAsn.
Db	676 ABATTIGTGTTAAGGACCTTTAACAGGTTGGCTGAATTTTGGAGCAGAGTTCAGGAACATA 735
QY	241 GluThrAsnTyrThrArgIlepheLeuTyrSerGlyGluProThrTyrLeuGlyA 259
Db	736 GAAACCAACTATACCAGAAATATTTCCTTTACAGTGGGAGAAACCTTACTTA

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NIH-MGC http://mgc.nci.nih.gov/
National Institutes of Health,
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Plate: LLAM11023 row: a column: 20
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Tissue Procurement: ATCC
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Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTAACCCCATTACAAAAAAATTTTTAAATTAACCCGCCCTTCTCAAAACCAC 908
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                                                                                              CTTTGGCTCGCGGTGGTTCCGGGCTGGTCCCGGGTCTCGGGCATCCCCGGCGCGCCAC
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                                                         TrpProValProTyrLysArgPheAspPheArgProLysProAspProTyrCysGlnAla
                                                                                                                LeuTrpLeuAlaValValProGlyTrpSerArgValSerGlyIleProSerArgArgHis
 LysTyrThrPheCysProThrGlySerProIleProValMetGluGlyAspAspAspIle
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                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="NIH_MGC_10"
/note="Organ: cervix; Vector: pCMV-SPORT6; Site_1: NotI; Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.5 kb. Library prepared by Life Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
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                                                CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: Incyte Genomics, Inc.
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LINL at:
http://image.llnl.gov
Plate: LLAM11253 row: n column: 06
High quality sequence stop: 762.
                                                                                                                                                                                                                                                                                                                                                                                                                       BI223533 787 bp mRNA linear EST 11-UT 602941923F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:5105093
                                                                                                                                                                             Contact: Robert Strausberg, 1
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                               1 (bases 1 to 787)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                               Unpublished (1999)
                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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      organism="Homo sapiens"/
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[0-010-050A-2 (1-346) x BI223533
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                                   le-GluThrAsnTyrThrArg-IlePheLeuTyrSerGly 252
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/note="Organ: cervix; Vector: pCMV-SPORT6; Site 1: Not1;
/note="Organ: cervix; Vector: pCMV-SPORT6; Site 1: Not1;
/site 2: Sal1; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.4 kb. Library prepared by Life
Technologies."
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/tissue_type="cervical carcinoma cell line"
/lab_host="DH10B"
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Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDM, libraries and normalization Unpublished (2001)
Contact: Genoscope
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BP 191 91006 EVRY cedex - France
Email: segref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238.f.
more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BX342662 1077 bp mRNA linear EST 02-MAY-2003
BX342662 Homo sapiens B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED
Homo sapiens cDNA clone CSODL004YP03 5-PRIME, mRNA sequence.
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cgi-bin/cluster.cgi?seq=CSODL004CH02QP1&cluster=7238.f. Contac
Feng Liang Email : fliang@lifetech.com URL:
http://fulllength.invitrogen.com/ Invitroden Corporation 1600
Faraday Avenue Genoscope sequence ID : CSODL004CH02QP1.
Location/Qualifiers
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                eGluVaIPheArgLeuGlnAlaProValTrpGluPheLysTyrGlyAspLeuLeuGlyHi
                                                                                                                                                   /note="1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and Ecor vsites of the pcMvSPORT 6 vector. Library was normalized
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/cell type="B CELL (RAMOS CELL LINE) COT 25-NORMALIZED"
/cell line="RAMOS CELL LINE"
/clone lib="Homo sapiens B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED"
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                cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLN DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLAM.0105 row: g column: 19
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Mammalla; Butheria; Primates; Catarrhini;
I (bases 1 to 1098)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
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                                                                                                                                                                                                                 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D
                                                                                                                                                                                                                                                                                             Unpublished (1999)
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                                             LysPheValLeuArgThrPheAsnLysLeuAlaGluPheGlyAlaGluPheLysAsnIle
                                                                                                                                                                                                                                  <u>AACCAAATGGCAAAGTGGGTGAAACAGGACAATGAAACAGGAATTTATTCTGAGACCTGG</u>
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Slig-dT primed. Average insert size_1.767 kb. Library
enriched for full-length clones and constructed by Life
Technologies. Note: this is a NIH_MGC Library."
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BU621797
BU621797.1 GI:23288012
EST.
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Tissue Procurement: James Martin

CDNA Library preparation: Dr. M. Bento Soares, University of Iowa

CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa

DNA Sequencing by: Dr. M. Bento Soares, University of Iowa

Clone Distribution: Clone distribution information can be obtaine:

from Dr. M. Bento Soares, bento-soares@uiowa.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 699)
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National Cancer Institute, Cancer Genome Anatomy Project
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ThrSerValPheGlyProThrGlyAsnLysThrLeuGlyLeuAlaIleLysArg
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                                                                                                                                                                                / clone libe "NCI CGAP FLI"

//clone libe "NCI CGAP FLI"

//note="Organ: Chondrosarcoma; Vector: pT713-Pac

(Pharmacia) with a modified polylinker; Site 1: EcoR I;

Site 2: Not I; NCI CGAP FLI is a normalized CDNA library

derived from a pool of mRNA obtained from 4 cell lines

from grade III chondrosarcoma tissues. The library was

constructed according to Bonaldo, Lennon and Soares,

genome Research, 6:791-806, 1996. First strand cDNA

synthesis was primed with an oligo-dT primer containing a

Not I site. Double stranded cDNA was ligated to an EcoR I

adaptor, digested with Not I, and cloned directionally

into pT713-Pac vector. The oligonucleotide used to prime

the synthesis of first-strand cDNA contains a library tag

sequence that is located between the Not I site and the

(dT)18 tail. The sequence tag for this library is

GAGGTCGGTG. The cell lines were provided by Dr. James

Martin from the University of Iowa.

TAG_TISSUE=Human Chondrosarcoma Grade 3 cell line mix

TAG_TISUE-Human Chondrosarcoma Grade 3 cell line mix
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/tissue_type="Cell lines"
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|mol_type="mRNA"
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1 (bases 1 to 1201)

Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Full-length cDNA libraries and normalization

Unpublished (2001)
Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Email: seqref@genoscope.cns.fr, Web : www
                                                                                                                                                                                                                                                                                      AL571805 1201 bp mRNA linear EST 31-MAY-200:
AL571805 Homo sapiens PLACENTA COT 25-NORMALIZED Homo sapiens cDNA
clone CSODIO30XJ01 3-PRIME, mRNA sequence.
                                                           On Feb 16, 2001 this sequence version Contact: Genoscope
                                                                                                                                                                                                                                  Homo sapiens (human)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LeuValGlnValAlaThrIleSerGlyAsnMetPheAsnGlnMetAlaLysTrpValLys
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3-10-010-050A-2 (1-346) x AL571805 (1-1201)
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Feng Liang Email : filang@lifetech.com URL :
http://fulllength.invitrogen.com/ InvitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSODI030CE01NP1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Library was constructed by Life Technologies, a division of Invitrogen. This sequence belongs to sequence cluster 7238.f For more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        http://www.genoscope.cns.fr/
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PheArgSerThrLeuThrGlyLysAsnTyrThrMetGluTrpTyrGluLeuPheGlnLeu 129
                                                                                                                                                                                                                                                                                                                                                                                                                 YAlaGluThrTrpPheAspSerTyrAspCysSerLysPheValLeuArgThrPheAsnLy 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nAspAsnGluThrGlyIleTyrTyrGluThrTrpAsnValLysAlaSerProGluLysGl
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                                                                                                                                                                                                                                                                                                                                  sLeuAlaGluPheGlyAlaGluPheLysAsnIleGluThrAsnTyrThrArgIlePheLe
                                                                            rLysGluPheLeuLeuSerLeuLeuGlnIlePheAspAlaValIleValHisLysGlnPh 309
                                                                                                                            CAAGACTCTTGGTTTAGCCATAAAAAGATTTTATTACCCCTTCAAACCACATTTGCCAAC
                                                                                                                                                       nLysThrLeuGlyLeuAlaIleLysArgPheTyrTyrProPheLysProHisLeuProTh
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/clone_Tib="Homo sapiens PLACENTA COT 25-NORMALIZED".
/clone="Ist strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
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/db_xref="taxon:9606"
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TITLE
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Tissue Procurement: ATCC
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NIH-MGC http://mgc.nci.nih.gov/
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601450425F1 NIH_MGC_65 Homo
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Clone distribution: MGC clone distribution information can
found through the I.M.A.G.B. Consortium/LLNL at:
http://image.llnl.gov
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (human)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium
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                                                                                                                                                                       LeuArgProGluMetAspAlaProPheTrpCysAsnGlnGlyAlaAlaCysPhePheGlu
                                                                   LysAsnTyrThrMetGluTrpTyrGluLeuPheGlnLeuGlyAsnCysThrPheProHis 136
                                                                                                            CTCCTGGGACACTTGAAAATTATGCATGATGCCATTGGATTCAGAAGTACATTAACTGGC
                                               AAGAACTACACAATGGAATGGTATGAACTTTTCCAACTTGGCAACTGTACATTTCCCCAT
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                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="adenocarcinoma"
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/clone_lbe"NIH_MGC_65"
/clone_to="Organ" colon; Vector: pCMV-SPORT6; Site_1: Not1;
/note="Organ: colon; Vector: pCMV-SPORT6; Site_1: Not1;
/site_2: Sall; Cloned unidirectionally. Primer: Oligo d'
Site_2: Sall; Cloned unidirectionally. Organization d'
Nerage insert size 1.8 kb. Library constructed by Li
Technologies. "
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/db_xref="taxon:9606"
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5', mRNA sequence.
CB215456
                                                                                                                                                                                                          Email: cgapbs-r@mail.nih.gov

CDNA Library Preparation:

cDNA Library Arrayed by: The I.M.A.G.E. Consortium/LLNL

DNA Sequencing by: National Institutes of Health Intram

Sequencing Center (NISC)
                                                                                          riate: LLAM13163 row: E column:
Seq primer: M13RP1 reverse primer
Location/Qualifiers
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                                                                                                                                                                          Clone distribution: NCI-CGAP clone distribution found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg,
                                                                                                                                                                                                                                                                                                                       Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                       NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP)
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Plate: LLAM13163 r
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TACGACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAGTTGGCTGAATTTGGAGCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TyrAspCysSerLysPheValLeuArgThrPheAsnLysLeuAlaGluPheGlyAlaGlu
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlyAsnMetPheAsnGlnMetAlaLysTrpValLysGlnAspAsnGluThrGlyIleTyr
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1 to 641)
              /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5937013"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:28263648
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BQ919385 974
AGENCOURT 8802804 NIH_MGC_40
5', mRNA sequence.
BQ919385
BQ919385.1 GI:22334083
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                                                                                                                                              GACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAGTTG
                                                                                                                                                                 AspCysSerLysPheValLeuArgThrPheAsnLysLeu 230
                                                                                                                                                                                                                   GAGACATGGAATGTAAAAGCCAGCCCAGAAAAGGGGGCAGAGACATGGTTTGATTCCTAC
                                                                                                                                                                                                                                       AACATGTTCAACCAAATGGCAAAGTGGGTGAAACAGGACAATGAAACAGGAATTTATTAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                   /tissue_type="normal endometrium, late proliferative phase, cycle day 13"
/lab_host="DH10B (T1-resistant)"
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/clone lib="NICHD HS UL1"
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1 (bases 1 to 974)
NIH-MCC http://mgc.nci.nih.gov/
National Institutes of Health, Mammalian Gene
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                     GlnAlaLysTyrThrPheCysProThrGlySerProTleProValMetGluGlyAspAsp
                                                                                                                                                                                                                                       ArgHisTrpProValProTyrLysArgPheAspPheArgProLysProAspProTyrCys
                                                                                                                                                                                                                                                                                                            GCGCTGCTCGGGGCTGGCGACGATTCTGGGCGCCCCCGACGTCTGGG---
                                                                                                                                                                                                                                                                                                                                                     AlaLeuLeuTrpLeuAlaValValProGlyTrpSerArgValSerGlyIleProSerArg
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                                                                                                                                                                                                                                                                                                                                                                                                                                     GlyAlaGlyAlaAlaArgGly------ArgAlaSerTrp-----CysTrpAlaLeu
                    GlyHigLeuLygIleMetHisAgpAlaIleGlyPheArgSerThrLeuThrGlyLygAsn
                                                                                                 AspIleGluValPheArgLeuGlnAlaProValTrpGluPheLy8TyrGlyAspLeuLeu
                                                                                                                                                          CAAGCTAAGTATACTTTCTGTCCTACCGGCTCGCCCATCCCAGTTATGAAGGACAATGAC
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Location/Qualifiers
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sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note=Torgan: prostate; Vector: pOTB7; Site_1: XhoI; Site_2: ECORI; CDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5 adaptor: GGCACCAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies). Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="mRNA"
/db xref="taxon:9606"
/clone="IMAGE:6382620"
/clssue_type="carcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_40"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Homo sapiens"
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                         GlnPheTyr
                                                                                                          AATTTTATTGGCCCCTTCCAGACCGAATTTGTTCAACCAAAGATTTTCCTGATGAAATTT
                                                                                                                                                              AATGAAACATCTATTTTGGGCCCAAAGGGAACAAGACTTCTGGCCTTTGGCCCATAAAAA 842
                                                                                                                                                                                  AsnGluThrSerValPheGlyProThrGlyAsnLysThr-LeuGlyLeuAlaIle-LysA 278
                                                                                                                                                                                                                       AAGATAGAAACAAACTATACGAAAATATTTCTTTACAGTGGAGAGCCTATTTACCTGGGA
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                                                                             LeuGln---IlePheAspAlaVal-----
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Search completed: April 25, 2004, 05:45:56 Job time: 4408.8 secs

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ALIGNMENTS

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Patent No. US20020042093A1
Patent No. US20020042093A1
Patent No. US20020042093A1
Patent No. US20020042093A1
Patent No. US20020042093A1
Patent Septemble Patent O.
APPLICANT: Gilbertson, Debra G.
APPLICANT: Gilbertson, Debra G.
TITLE OF INVENTION: CHROMOSOME 13
FILE REFERENCE: 97-38
CURRENT PILICATION NUMBER: US/09/122,383A
CURRENT FILING DATE: 1998-07-24
FEARLIER APPLICATION NUMBER: 60/053,613
FEARLIER FILING DATE: 1997-07-24
INUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 1
LENGTH: 1486
TYPE: DNA
ORGANISM: Homo sapien
FEARURE:
NAME/KEY: CDS
LOCATION: (47)...(1084)
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Score

Query Match Length DB

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Description

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AspAlaValIleValHisLysGlnPheTyrLeuPheTyrAsnPheGluTyrTrpPheLeu
                       TACCCCTTCAAACCACATTTGCCAACTAAAGAATTTCTGTTGAGTCTCTTGCAAATTTTT
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ORGANISM: Homo &
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APPLICANT: Sheppard, Paul O.
APPLICANT: Gilbertson, Debra G.
APPLICANT: Gilbertson, Debra G.
TITLE OF INVENTION: SECRETED PROTEINS ENCODED BY HUMAN
TITLE OF INVENTION: CHROMOSOME 13
FILE REFERENCE: 97-38C1
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NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1
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Publication No. US20020173624A1
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Publication No. US20040048304A1
GENERAL INFORMATION:
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CURRENT FILING DATE: 2003-09-03
PRIOR APPLICATION NUMBER: US 09/397945
PRIOR FILING DATE: 1999-09-17
                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: 95 Human secreted proteins FILE REFERENCE: PZ027P1C1
                                                                                                                                                                                                                                                                                                                                               APPLICANT: Ruben et. al.
                                                                                               COR APPLICATION NUMBER: PCT/US99/05804
COR FILING DATE: 1999-03-18
COR APPLICATION NUMBER: 60/078,566
COR FILING DATE: 1998-03-19
COR APPLICATION NUMBER: 60/078,576
COR APPLICATION NUMBER: 60/078,573
COR FILING DATE: 1998-03-19
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US-10-653-595-26
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Query Match:
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PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/078,578
PRIOR FILING DATE: 1998-03-19
Remaining Prior Application data removed
NUMBER OF SEQ ID NOS: 470
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LOCATION: (1729)
OTHER INFORMATION:
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LOCATION: (152
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OTHER INFORMATION:
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CURRENT APPLICATION NUMBER: US/09/397,945
CURRENT FILING DATE: 1999-09-17
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                                                                                                                                                RENT FILING DATE: 1999-09-17
OR APPLICATION NUMBER: PCT/US99/05804
OR FILING DATE: 1999-03-18
OR APPLICATION NUMBER: 60/078,566
OR FILING DATE: 1998-03-19
OR APPLICATION NUMBER: 60/078,576
OR APPLICATION NUMBER: 60/078,573
OR FILING DATE: 1998-03-19
OR APPLICATION NUMBER: 60/078,573
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DR FILLING DATE: 1998-03-19
DR APPLICATION NUMBER: 60/078,579
DR FILLING DATE: 1998-03-19
DR APPLICATION NUMBER: 60/080,314
DR FILLING DATE: 1998-04-01
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            APPLICATION NUMBER: 60/080,312
FILING DATE: 1998-04-01
APPLICATION NUMBER: 60/078,578
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PRIOR APPLICATION NUMBER: 60/078,581
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,577
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,563
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,563
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/080,313
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GENERAL INFORMATION:
APPLICANT: Sheppard, Paul O.
APPLICANT: Gilbertson, Debra G.
APPLICANT: GILDERTSON, DEBRA G.
TITLE OF INVENTION: CHROMOSOME 13
                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 13, Application UPatent No. US20020042093A1
                                                                                                                                                                                               SEQ ID NO 13
                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/122,383A
CURRENT FILING DATE: 1998-07-24
EARLIER APPLICATION NUMBER: 60/053,613
EARLIER FILING DATE: 1997-07-24
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SOFTWARE: FastSEQ for Windows Version
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NAME/KEY: variation
LOCATION: (1)...(1038)
OTHER INFORMATION: n is
                                                                                                                    ORGANISM: Artificial Sequence FEATURE:
                                                                            OTHER INFORMATION: Degenerate nucleotide sequence encoding OTHER INFORMATION: polypeptide of SEQ ID NO:2
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AspAlavalIlevalHistysGlnPheTyrLeuPheTyrAsnPheGluTyrTrpPheLeu
                                         TAYCCNTTYAARCCNCAYYTNCCNACNAARGARTTYYTNYTNWSNYTNYTNCARATHTTY
                                                           TyrProPheLysProHisLeuProThrLysGluPheLeuLeuSerLeuLeuGlnIlePhe
                                                                                                                   ThrSerValPheGlyProThrGlyAsnLysThrLeuGlyLeuAlaIleLysArgPheTyr
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West Local Similarity:
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Publication No. US20020173624A1
GENERAL INFORMATION:
APPLICANT: Sheppard, Paul O.
APPLICANT: Gilbertson, Debra G.
APPLICANT: Gilbertson, Debra G.
TITLE OF INVENTION: SECRETED PROTEINS ENCODED
TITLE OF INVENTION: CHROMOSOME 13
FILE REFERENCE: 97-38C1
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PRIOR FILING DATE: 1998-07-24
PRIOR APPLICATION NUMBER: US 60/053,613
PRIOR FILING DATE: 1997-07-24
NUMBER OF SEQ ID NOS: 19
SOFTMARE: FastSEQ for Windows Version 4.0
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OTHER INFORMATION: n =
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    APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David R.
APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACII
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACII
CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT APPLICATION NUMBER: US 60/180,312
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR APPLICATION NUMBER: US 99/632,366
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILING DATE: 2000-08-03
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILING DATE: 2000-08-03
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILING DATE: 2000-10-04
PRIOR PRIOR PRIOR DATE: 2000-10-04
PRIOR APPLICATION NUMBER: US 09/236,359
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Sequence 26, Application US/10653595
Publication No. US20040048304A1
GENERAL INFORMATION:
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PRIOR APPLICATION NUMBER: US 09/397945
PRIOR FILING DATE: 1999-09-17
PRIOR APPLICATION NUMBER: PCT/US99/0580
PRIOR FILING DATE: 1999-01-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Ruben et. al.
TITLE OF INVENTION: 95 Human secreted proteins
FILE REFERENCE: PZ027F1C1
                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/10/653,595
                                                               DR FILING DATE: 1998-03-19
DR APPLICATION NUMBER: 60/078,573
DR FILING DATE: 1998-03-19
DR APPLICATION NUMBER: 60/078,574
DR FILING DATE: 1998-03-19
DR APPLICATION NUMBER: 60/078,579
                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: PCT/US99/05804
FILING DATE: 1999-03-18
                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/078,566
FILING DATE: 1998-03-19
                                                                                                                                                                                                                  APPLICATION NUMBER: 60/078,576
                                            FILING DATE: 1998-03-19
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NUMBER: 60/080,314
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PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/078,578
PRIOR FILING DATE: 1998-03-19
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APPLICATION FILING DATE:

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TITLE OF INVENTION: 55 Human secreted proteins
FILE REFERENCE: PZ027P1
CURRENT APPLICATION NUMBER: US/09/397,945
CURRENT FILING DATE: 1999-09-17
PRIOR APPLICATION NUMBER: PCT/US99/05804
PRIOR PILING DATE: 1999-03-18
PRIOR PFILING DATE: 1998-03-19
PRIOR FILING DATE: 1998-03-19
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,576
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Publication No. US20030065139A1
GENERAL INFORMATION:
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                             OR FILING DATE: 1998-03-19
OR APPLICATION NUMBER: 60/078,579
OR FILING DATE: 1998-03-19
OR APPLICATION NUMBER: 60/080,314
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PRIOR APPLICATION NUMBER: 60/078,581
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,577
PRIOR APPLICATION NUMBER: 60/078,563
PRIOR FILING DATE: 1998-03-19
PRIOR FILING DATE: 1998-03-19
PRIOR FILING DATE: 1998-04-01
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3-09-122-383-13
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                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Sheppard, Paul O.
APPLICANT: Gilbertson, Debra G.
TITLE OF INVENTION: SECRETED PROTEINS ENCODED
TITLE OF INVENTION: CHROMOSOME 13
FILE REFERENCE: 97-38
                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/122,383A CURRENT FILING DATE: 1998-07-24 EARLIER APPLICATION NUMBER: 60/053,613 EARLIER FILING DATE: 1997-07-24
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NAME/KEY: variation
LOCATION: (1)...(1038)
OTHER INFORMATION: n i
                                                                                 OTHER INFORMATION:
                                                                                                                           ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                 TYPE: DNA
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Percent Similarity:
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AspAlaVallieValHisLysGlnPheTyrLeuPheTyrAsnPheGluTyrTrpPheLeu
                                         TAYCCNTTYAARCCNCAYYTNCCNACNAARGARTTYYTNYTNWSNYTNYTNCARATHTTY
                                                         TyrProPheLysProHisLeuProThrLysGluPheLeuLeuSerLeuLeuGlnIlePhe
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S-10-010-050A-2 (1-346) x US-10-010-050A-13 (1-1038)
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LENGTH: 1038
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APPLICANT: Gilbertson, Debra G.
TITLE OF INVENTION: SECRETED PROTEINS ENCODED
TITLE OF INVENTION: CHROMOSOME 13
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SOFTWARE: FastSEQ for Windows Version 4.0
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LeuLysIleMetHisAspAlaIleGlyPheArgSerThrLeuThrGlyLysAsnTyrThr
                                                                           GluValPheArgLeuGlnAlaProValTrpGluPheLysTyrGlyAspLeuLeuGlyHis
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                                                          GARGINTTYMGNYINCARGCNCCNGINIGGGARITYAARTAYGGNGAYYINYINGGNCAY 300
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         FILE REFERENCE: Acomica-X-1
CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR PILING DATE: 2000-02-04
PRIOR RELING DATE: 2000-05-26
PRIOR RELING DATE: 2000-05-26
PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR PILING DATE: 2000-08-03
PRIOR APPLICATION NUMBER: US 09/632,359
PRIOR PILING DATE: 2000-10-04
PRIOR APPLICATION NUMBER: US 60/236,359
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                                                                                                                                                                                                                                                                                                                                               Sequence 22592, Application Patent No. US20020048763A1 GENERAL INFORMATION:
                                                                                                                                                                                                                               APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
APPLICANT: Hanzel, David K.
APPLICANT: Chen, Wendheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
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OTHER INFORMATION: MAP TO ACCO1226.1

OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 4.5

OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 6.3

OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 5.6

OTHER INFORMATION: EXPRESSED IN ADULT LIVER, SIGNAL = 5.6

OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 3.6

OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 3.9

OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 4.2

OTHER INFORMATION: MITHIT: 915729771, EVALUE 0.00e+00

OTHER INFORMATION: SWISSPROT HIT: 075503, EVALUE 2.00e-96

OTHER INFORMATION: EST_HUMAN HIT: H01255.1, EVALUE 0.00e+00
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st Local Similarity:
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SEQ ID NO 22592
LENGTH: 494
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NUMBER OF SEQ ID NOS: 49117
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TYPE: DNA
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APPLICATION NUMBER: PCT/US01/00668
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00663
FILING DATE: 2001-01-30
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FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00661
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APPLICATION NUMBER: PCT/US01/00665
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APPLICATION NUMBER: PCT/US01/00669
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APPLICATION NUMBER: PCT/US01/00664
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APPLICATION NUMBER: PCT/US01/00670
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TyrThrArgIlePheLeuTyrSerGlyGluProThrTyrLeuGlyAsnGluThrSerVal
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                             Alignment Scores:
                Pred. No.:
                                                                 US-10-040-739-825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 825, Applicat Publication No. US2002 GENERAL INFORMATION:
                                                                                                                                 INFORMATION FOR SEQ ID NO: 825:
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
LENGTH: 506 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION UNMBER: US/10/040,739
PILING DATE: 07-Jan-2002
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Merberg, David
Treacy, Maurice
Spaulding, Vikki
TITLE OF INVENTION: SECRETED,
NUMBER OF SEQUENCES: 1519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Jacobs,
                                                                                                                                                                                                                         NAME: Brown, Scott A.
REGISTRATION NUMBER: 32,724
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 498-8224
TELEPAX: (617) 876-5851
                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 09/036,520 FILING DATE: 03-JUN-1998 *** ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Disk
                                                                                  TOPOLOGY: line MOLECULE TYPE: cDNA SEQUENCE DESCRIPTIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Cambridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 87 CambridgePark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: U.S.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: Genetics Institute,
STREET: 87 CambridgePark Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/10040739 o. US20020173635A1
                                                                                     DESCRIPTION: SEQ ID
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                                                                                     NO:
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 Length:
Matches:
                                                                                     825:
   133
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PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR APPLICATION NUMBER: US 99/632,366
PRIOR APPLICATION NUMBER: US 99/632,366
PRIOR APPLICATION NUMBER: US 99/632,366
PRIOR FILING DATE: 2000-09-03
PRIOR APPLICATION NUMBER: US 60/236,359
PRIOR APPLICATION NUMBER: PCT/US01/00666
PRIOR APPLICATION NUMBER: PCT/US01/00667
PRIOR APPLICATION NUMBER: PCT/US01/00667
PRIOR APPLICATION NUMBER: PCT/US01/00664
PRIOR APPLICATION NUMBER: PCT/US01/00664
PRIOR APPLICATION NUMBER: PCT/US01/00669
PRIOR APPLICATION NUMBER: PCT/US01/00669
PRIOR APPLICATION NUMBER: PCT/US01/00669
PRIOR APPLICATION NUMBER: PCT/US01/00669
PRIOR FILING DATE: 2001-01-30
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PRIOR FILING DATE: 2001-01-30
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st Local Similarity:
ery Match:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Hanzel, David K.
APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Penn, Sharron G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE: Aeomica-X-1
OR FILING DATE: 2001-01-30
OR APPLICATION NUMBER: PCT/US01/00669
OR APPLICATION NUMBER: PCT/US01/00665
OR APPLICATION NUMBER: PCT/US01/00665
OR FILING DATE: 2001-01-30
OR APPLICATION NUMBER: PCT/US01/00668
OR FILING DATE: 2001-01-30
OR APPLICATION NUMBER: PCT/US01/00663
OR FILING DATE: 2001-01-30
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Best Local Similarity:
Query Match:
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Pred. No.:
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SOFTWARE: Annomax Sequence I
SEQ ID NO 5832
LENGTH: 474
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PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 2000-06-30
PRIOR APPLICATION NUMBER: US 09/774,203
PRIOR FILING DATE: 2001-01-29
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ORGANISM: Homo :
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OR APPLICATION NUMBER: PCT/US01/00662
OR FILING DATE: 2001-01-30
OR APPLICATION NUMBER: PCT/US01/00661
OR FILING DATE: 2001-01-30
OR APPLICATION NUMBER: PCT/US01/00670
OR FILING DATE: 2001-01-30
OR APPLICATION NUMBER: US 60/234,687
OR APPLICATION NUMBER: US 60/234,687
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                                                                       LeuLeuSerLeuLeuGlnIlePheAspAla
                                                                                                                                                GlyLeuAlaIleLysArgPheTyrTyrProPheLysProHisLeuProThrLysGluPhe
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I EXPRESSED IN PLACES
I EXPRESSED IN BONE I
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I EXPRESSED IN LUNG,
EXPRESSED IN HELA,
EXPRESSED IN HEART
EXPRESSED IN FETAL
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N BONE MARROW, SIGNAL = 5
N ADULT LIVER, SIGNAL = 5.6
N LUNG, SIGNAL = 3.6
N HELA, SIGNAL = 3.9
N HEART, SIGNAL = 4.2
N FETAL LIVER, SIGNAL = 5.9
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Matches:
Conservative:
Mismatches:
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Gaps:
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CURRENT APPLICATION NUMBER: US/10/264,049
CURRENT FILING DATE: 2002-10-04
PRIOR APPLICATION NUMBER: PCT/US01/18569
PRIOR TILING DATE: 2001-06-07
PRIOR APPLICATION NUMBER: US 60/209,467
PRIOR FILING DATE: 2000-06-07
NUMBER OF SEQ ID NOS: 4360
SOFTWARE: PALENTIN Ver. 3.1
IEQ ID NO 1859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Birse et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
FILE REFERENCE: PA133P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            equence 1859, Application US/10264049 ublication No. US20040005579A1
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LOCATION: (323)...(324)
OTHER INFORMATION: n equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc feature
LOCATION: (313)..(313)
OTHER INFORMATION: n equals
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OTHER INFORMATION: n equals
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LOCATION: (285)..(285)
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LOCATION: (175)..(175)
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LOCATION: (2)...(2)
OTHER INFORMATION: n equals
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LOCATION: (331)...(331)
OTHER INFORMATION: n equals
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCATION: (175)..(175)
OTHER INFORMATION: n equals
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LOCATION: (395)...(395)
OTHER INFORMATION: n equals
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        FEATURE: misc feature LOCATION: (483)...(483)
                                                                NAME/KEY: misc feature LOCATION: (478)...(478) OTHER INFORMATION: n equals
                                                                                                                                                  NAME/KEY: misc feature LOCATION: (464)..(464)
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LOCATION: (458)..(458)
OTHER INFORMATION: n equals
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LOCATION: (440)...(440)
OTHER INFORMATION: n equals
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INFORMATION: n equals
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APPLICANT: Jones, Robert
APPLICANT: Jones, Robert
APPLICANT: Jones, Robert
APPLICANT: Harlocker, Susan L.
APPLICANT: Harlocker, Susan L.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
TITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN CANCER
TITLE REFERENCE: 210121.497
FILE REFERENCE: 210121.497
CURRENT APPLICATION NUMBER: US/09/867,701
CURRENT APPLICATION AUMBER: US/09/867,701
CURRENT FILING DATE: 2001-05-29
NUMBER OF SEQ ID NOS: 10912
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 2579
LENGTH: 351
TYPE: DNA
TYPE: DNA
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Best Local Similarity:
Query Match:
DB:
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Best Local Similarity:
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US-09-867-701-2579
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TrpPheLeuProMetLysPheProPheIleLysIleThrTyrGluGluIleProLeuPro
 GC-TGCTTTTTTGAGGGAATTGATGATGTTCACTGGAAGGAAAATGGGACATTAGTTCAA
                                                                        CysThrPheProHisLeuArgProGluMetAspAlaProPheTrpCysAsnGlnGlyAla 151
                                                                                                                          SerThrLeuThrGlyLy8AsnTyrThrMetGluTrpTyrGluLeuPheGlnLeuGlyAsn
                  AlaCysPhePheGluGlyIleAspAspValHisTrpLysGluAsnGlyThrLeuValGln
                                                      TGTACATTTCCCCATCTCCGACCTGAAATGGATGCCCCTTTCTGGTGTAATCAAGGCGCT
                                                                                                             AGTACATTAACTGGCAAGAACTACACAATGGAATGGTATGAACTTTTCCAACTTGGCAAC
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SOFTWARE: PatentIn version 3.0
SEQ ID NO 1363
LENGTH: 473
TYPE: DNA
ORGANISM: Homo sapiens
IS-09-954-456-1363
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lest Local Similarity:
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FILE REFERENCE: 689290-76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-954-456-1363/c
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CURRENT FILING DATE: 2001-09-18
PRIOR APPLICATION NUMBER: US/60/233,617
PRIOR FILING DATE: 2000-09-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US/60/234,052
PRIOR FILING DATE: 2000-09-20
PRIOR APPLICATION NUMBER: US/60/234,923
PRIOR FILING DATE: 2000-09-25
PRIOR APPLICATION NUMBER: US/60/235,134
PRIOR FILING DATE: 2000-09-25
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NUMBER OF SEQ ID NOS: 2276
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OR FILING DATE: 2000-09-26
OR PAPELICATION NUMBER: US/60/235,638
OR FILING DATE: 2000-09-26
OR APPLICATION NUMBER: US/60/235,711
OR REPLICATION NUMBER: US/60/235,711
OR APPLICATION NUMBER: US/60/235,720
OR FILING DATE: 2000-09-27
OR FILING DATE: 2000-09-27
OR FILING DATE: 2000-09-27
OR FILING DATE: 2000-09-27
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                                                                                              LysPheProPheIleLysIleThrTyrGluGluIleProLeuProIleArgAsnLysThr 342
                                                                      ĠrĠatrĠrĠĊaĊaaaĊaĠrrĊratrrĠrrrraraatririgaatratrĠĠrirrtracctarĠ
<u>AAATTCCCCTTTTATTAAAATAACATATGAAGAAATCCCTTTACCTATCAGAAACAAAACA</u>
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Matches:
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RESULT 13
US-09-908-975-10339
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Best Local Similarity:
Query Match:
                                                                                                                                                                                                                         APPLICANT: Xu, Yongyao
APPLICANT: Wang, Youzhen
APPLICANT: Steinmann, Kathleen
APPLICANT: Steinmann, Kathleen
TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
TITLE OF INVENTION: FOR IDENTIFICATION, ASSESSMENT, PRE
TITLE OF INVENTION: THERAPY OF BREAST CANCER
FILE REFERENCE: MRI-049
FILE REPERENCE: MRI-049
CURRENT APPLICATION NUMBER: US/10/198,846
CURRENT APPLICATION NUMBER: 50/306,220
PRIOR APPLICATION NUMBER: 60/306,220
PRIOR FILING DATE: 2001-07-18
PRIOR FILING DATE: 201-07-18
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US-09-908-975-10339
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 32337
SOFTWARE: PatentIn version 3.0
SEQ ID NO 10339
LENGTH: 60
US-10-198-846-9753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: OLIGONUCLEOTIDE LIBRARY FOR DETECTING RNA TRANSCRIPTS AND SPLICE \
TITLE OF INVENTION: THAT POPULATE A TRANSCRIPTOME
FILE REFERENCE: 36688-0005
CURRENT APPLICATION NUMBER: US/09/908,975
CURRENT FILING DATE: 2001-07-20
PRIOR APPLICATION NUMBER: US 60/287,724
PRIOR FILING DATE: 2001-05-02
PRIOR APPLICATION NUMBER: US 60/287,724
PRIOR FILING DATE: 2001-05-02
PRIOR APPLICATION NUMBER: US 60/221,607
PRIOR APPLICATION NUMBER: US 60/221,607
PRIOR FILING DATE: 2000-07-28
PRIOR FILING DATE: 2000-07-28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 9753, Application US/10198846 publication No. US20030099974A1 GENERAL INFORMATION:
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                 IERNGTH: 2667

TYPE: DNA
ORCANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: 2667
OTHER INFORMATION: n = A,T,C o:
                                                                                                                                                                      SEQ ID NO 9753
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SOPTWARE: FastSEQ for Windows Version 4.0
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MINTZ, Eli
MINTZ, Liat
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APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Slater, Steven C.
APPLICANT: Goldman, Barry S.
APPLICANT: Goldman, Barry S.
APPLICANT: Chen, Xianfeng
APPLICANT: Chen, Xianfeng
TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN
TITLE OF INVENTION: PLANTS WITH IMPROVED PROPERTIES
FILE REFERENCE: 38-10 (52052) B
FILE REFERENCE: 38-10 (52052) B
FILE REFILING DATE: 2003-02-28
PRIOR APPLICATION NUMBER: US 60/360,039
PRIOR FILING DATE: 2002-02-21
PRIOR TELLING DATE: 2002-02-21
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[-10-010-050A-2 (1-346) \times US-09-108-006C-2 (1-14070)]
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ery Match:
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INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                            12312 AGGGGTCCTTTATGATTATGTCAACAAGTACCACTGGGAACACACAGGGGCTCACCCTGAG 12371
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     32 ValSerGlyIleProSerArgArgHisTrpProValProTyrLysArgPheAsp-PheAr 51
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: 215-504-4444
TELEFAX: 215-504-4545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 14070 base pairs TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                        aAlaCysPhePheGluGlyIleAspAspValHisTrpLysGluAsnGly---ThrLeuVa 17)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nCysThrPheProHisLeuArgProGluMetAspAlaProPheTrpCysAsnGlnGlyAl 151
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                                  uAlaGluPheGlyAlaGluPheLysAsnIleGluThrAsn---TyrThrArgIlePheLe 249
                                                                                                                                                                                                         pasnGluThrGlyIleTyrTyrGluThrTrpasnValLysalaSerProGluLysGlyAl 210
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AGAAGTGTCTTCAAAGCTGAGAAGAAATCTGCAGGACCATGCTGAGTGGGTTTATCAA-- 12429
                                                                                                                                                                                                                                                                                              lGlnValAlaThrIleSerGlyAsnMetPheAsnGlnMetAlaLysTrpValLysGlnAs 190
                                                                                  CAGTGGGACCACTGGGACCTACCAA---
                                                                                                                    aGluThrTrpPheAspSerTyrAspCysSerLysPheValLeuArgThrPheAsnLysLe
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GAGTGGAAGGACAAGGCCCAGAATCTGTACCAGGAACTGTTGAC 12548
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Mismatches:
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                          FIGURECULE TYPE: DNA (genomic);
SEQUENCE DESCRIPTION: SEQ ID NO: 22:
US-09-453-702B-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 22, Application US/09453702B
Patent No. 6365723
GENERAL INFORMATION:
APPLICANT: Blattner, Frederick R.
Alignment Scores:
                                                                                                                                                                     TELEFAX: (608) 251-9
INFORMATION FOR SEQ ID NO: 22:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 8.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/453,702B
FILING DATE: 03-Dec-1999
CLASSIFICATION: CURROWN>
PRIOR APPLICATION: CURROWN>
                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/110,955
APPLICATION NUMBER: 60/110,955
FILING DATE: 04-DEC-1998
ATTORNEY/AGENT INFORMATION:
NAME: Seay, Nicholas J.
REGISTRATION NUMBER: 27386
REGISTRATION NUMBER: 27386
REFERENCE/DOCKET NUMBER: 960296.95017
TELEPHONE: (608) 251-5000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: No. 6365723el Sequences of E. coli 0157 NUMBER OF SEQUENCES: 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          294 uSerLeuLeuGlnīļePheAspAlaValIleVaļHisLysGlnPheTyr------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              249 uTyrSerGlyGluProThrTyrLeuGlyAsnGluThrSerValPheGlyProThrGlyAs
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STREET: 1 South Pinckney Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: WI
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                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                        LENGTH: 4643
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RESULT 3
US-09-489-039A-6332
; Sequence 6332, Application
; Patent No. 6610836
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| CTTGCAGCAGCGATGTTCACCACGCGTCTGCATGAGCGTCTGGGTAATACGTAC 3629
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGTCATAATAAATGGCGTGATGGCAGCGGCCAGCTGAAAACCCCAAAGCAATCGCTATGTT
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                                                                                                                                                                                                                                                                                                                                     GlyThrLeuValGln-------ValAlaThrIleSerGlyAsnMet 179
                                                                                                                                                                                                                                                                                                                                                                 AGCCAAAACGGCAGCGACCGCTGGCATGTTGGGGTCATGGCGGGATATGGCAACAGCGAC
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                                                                          GCTGGATACAAACACAAATTAGCTGAATTT
                                                                                                                                  AAAGGGGATGACTTACAAAGTGAATCCTATAAATCAAAAGGATTTACCGCTTCACTGGAA 4055
                                                                                                                                                                                                                      ThrTrpAsnValLysAlaSerProGluLysGlyAlaGluThrTrpPheAsp------
                                                                                                                                                                                                                                                                           PheAsnGlnMetAlaLysTrpValLysGlnAsp---AsnGluThrGlyIleTyrTyrGlu 198
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93.00
31.38%
20.34%
4.83%
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                                                                                                      PheAsnLysLeuAlaGluPhe 233
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                     US/09489039A
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GENERAL INFORMATION:
APPLICANT: GATY Breton et. al
APPLICANT: GATY BRETON ET. ACID AND AMINO ACID SEQUENCES RELATING TO K
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO K
TITLE OF INVENTION: PNEUMONIAE FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 2709.2004001
CURRENT APPLICATION NUMBER: US/09/489,039A
CURRENT FILING DATE: 2000-01-27
PRIOR APPLICATION NUMBER: US 60/117,747
PRIOR APPLICATION NUMBER: US 60/117,747
PRIOR APPLICATION NUMBER: US 60/117,747
PRIOR FILING DATE: 1999-01-29
NUMBER OF SEQ ID NOS: 14342
SEQ ID NO 6332
LENGTH: 1827
TYPE: DNA
ORGANISM: Klebsiella pneumoniae
US-09-489-039A-6332
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Best Local Similarity:
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 TGGCTTCACCTTCCCGATCTGGGGATTCCTCGCCAATACCGATATCTCTTACGATCCGCA
                            rĢļķīleTyrTyrGluThrTrp------ABnValLyBAlaSerProGl 207
                                                           |||
| TTTTGGCGACGCGCCAGTGGCTGCAGGCGGAGGAGGAGGAGGAGGAGGAGGATGAACTATCG 1190
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Best Local Similarity:
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SOFTWARE: PERL Program
SEQ ID NO 244
LENGTH: 7718
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 244, Application Patent No. 6673549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Furness, Michael
APPLICANT: Buchbinder, Jenny
TITLE OF INVENTION: GENES EXPRESSED IN C3A
FILE REFERENCE: PA-0041 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/976,594
CURRENT FILING DATE: 2001-10-12
PRIOR APPLICATION NUMBER: 60/240,409
PRIOR FILING DATE: 2000-10-12
                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                                    NAME/KEY: unsure
LOCATION: 6339-6362, 6967-7026
OTHER INFORMATION: a, t, c, g,
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OTHER INFORMATION: Incyte ID No.
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ATGGATGAGGACTTTTGCAGTCGCCTGAGGGAAGGCATGAGGATGAGAGCTCCTGAGTAC 5622
                                                  TACGGAGTATTGCTGTGGGAAATCTTCTCCTTAGGTGGGTCTCCATACCCAGGAGTACAA :562
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                                                                                                                                               RESULT 5
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                                                                                            Sequence 73, Applicat Patent No. 5676954
GENERAL INFORMATION:
                                                                   APPLICANT: APPLICANT:
     CORRESPONDENCE ADDRESS
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                                                                                                           73, Application o. 5676954
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                                                       Rogers, Bruce
Klapper, David G.
Rafnar, Thorunn
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APPLICANT: Rafnar, Thorunn
APPLICANT: Kuo, Mei-chang
TITLE OF INVENTION: Allergenic Proteins From Ragweed and
NUMBER OF SEQUENCES: 93
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ThrTrpAsnValLysAlaSerProGluLysGlyAlaGluThrTrpPheAspSerTyrAsp 218
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PheTrpCysAsnGlnGlyAlaAlaCysPhePheGlu-----GlyIleAspAspValHis 162
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuGlyAsnGluThrSerValPheGlyProThrGlyAsnLysThrLeuGlyLeuAlaIle 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AsnTyrThrArgIlePheLeuTyrSerGlyGluPro--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----CCGAATGCCACCTCCATGTTTGATGACTACCAGGGCGAC 3985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -PheLysTyrGlyAspLeuLeuGlyHisLeuLysIleMet 104
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COUNTRY: USA

Massachusetts

ADDRESSEE:

60 State Street, suite 510

LAHIVE & COCKFIELD

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (617)227-5941
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 02109-1875
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
TYPM PC COMDALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: IM
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: March 17, 1989
ATTORNEY/AGERT INFORMATION:
NAME: Amy E. Mandragouras
REGISTRATION NUMBER: 36,207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JURRENT AFFILIANTION NUMBER: US/UB/230,110.

APPLICATION NUMBER: US/UB/230,110.

FILING DATE: August 15, 1994

PRIOR APPLICATION DATA:

PRIOR APPLICATION NUMBER: US 07/529,951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: May 29, APPLICATION NUMBER: 1
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STRANDEDNESS: sing
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION:
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 178
                                                                158 IleAspAspValHisTrpLysGluAsnGlyThrLeuValGlnValAlaThrIleSerGly 177
                                                                                                                                                                            589
                                                                                                                                                                                                          118 AsnTyrThrMetGluTrpTyrGluLeuPheGlnLeuGlyAsnCysThrPheProHisLeu 137
                                                                                                                                                                                                                                                                                                                     586 GGTGATGCTATAAATGTTGCTGGTAGTTCACAAATATGG-----
                                                                                                                                                                                                                                                                                                                                                      78 AspaspIleGluValPheArgLeuGlnAlaProValTrpGluPheLysTyrGlyAspLeu
                                                                                                                                                                                                                                                                                                                                                                                                                               65 Cyspro-----
 AsnMetPheAsnGlnMetAlaLysTrpValLysGlnAspAsnGluThrGlyIleTyr---
                                   GCTGATGACACCCATTATCAAGATAAAGGCATGCTA-----
                                                                                                                                     ArgProGluMetAspAlaProPheTrpCysAsnGlnGlyAlaAlaCysPhePheGluGly
                                                                                                                                                                            TCACACGTG---
                                                                                                                                                                                                                                                ATCGACCATTGCTCGCTCAGTAAGGCTTCCGATGGGCTGCTCGATATCACCCTCGGCAGC 684
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(7) TD NO: 73:
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Indels:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                              ZIP: 02109-1875
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING PATENTIAN DATA:
APPLICATION NUMBER: US/08/290,448A
APPLICATION NUMBER: US/08/290,448A
                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Klapper, David G.
APPLICANT: Rafnar, Thorunn
APPLICANT: Kuo, Mei-chang
TITLE OF INVENTION: Allergenic Proteins From Ragweed and Uses
NUMBER OF SEQUENCES: 93
       ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
Amy E. Mandragoura
                                                 FILING DATE: August 15, 1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/529,951
FILING DATE: May 29, 1990
APPLICATION NUMBER: US 07/325,365
FILING DATE: March 17, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                  COUNTRY: USA
ZIP: 02109-1
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                                                                                                                                                                                                                                                                                                                                       Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/08290448A
                                                                                                                                                                                                                                                                                                                                                                            E: LAHIVE & COCKFIELD
60 State Street, suite 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rogers, Bruce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              David G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TyrGluThrTrpAsnValLysAlaSerProGluLysGlyAlaGlu 211-
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: IMTELECOMMUNICATION INFORMATION: (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
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LOCATION:
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TYPE: nucleic acid
STRANGEDNESS: single
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                         SerValPheGlyProThrGly---AsnLysThrLeuGlyLeuAlaIleLysArgPheTyr 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ArgProGluMetAspAlaProPheTrpCysAsnGlnGlyAlaAlaCysPhePheGluGly 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AsnTyrThrMetGluTrpTyrGluLeuPheGlnLeuGlyAsnCysThrPheProHisLeu 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AspaspIleGluValPheArgLeuGlnAlaProValTrpGluPheLysTyrGlyAspLeu 97
GCTATTTTTCTCCCATCCGGGTCTGATCCAGTGCTAACCCCTGAGCAAAAAAGCAGGGATG 1113
                                                                                                                                                         ArgThrPheAsnLysLeuAlaGluPheGly-----AlaGluPheLysAsnIleGlu 241
                                                                                                                                                                                                                                                             GTCGTTAACAACAACTACGACAGATGGGGAACGTACGCCATCGGTGGTAGCTCGGCCCCA
                                                                                                                                                                                                                                                                                                                           AACATGTTCACCGATCACGTTGACCAAAGAATGCCTAGATGTAGATTTGGGTTTTTCCAA
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                                                                                           ThrAsnTyrThrArgllePheLeuTyrSerGlyGluProThrTyrLeuGlyAsnGluThr 261
                                                                                                                                                                                           ACTATACTCAGCCAAGGGAACAGATTCTTCGCCCCCGATGATATCATCAAG-----
                                                               TGGAGAACAGATAGAGACTTGCTTGAAAATGGT
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US-08-175-069A-73
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Percent Similarity:
Best Local Similarity:
Query Match:
                                                      Score:
                                                                       Pred. No.:
                                                                                   Alignment Scores:
                                                                                                                          US-08-175-069A-73
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                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/529,951
APPLICATION NUMBER: US 07/325,365
APPLICATION NUMBER: US 07/325,365
FILING DATE: March 17, 1989
ATTORNEY/AGENT INFORMATION:
NAME: Amy E. Mandragouras
REGISTRATION NUMBER: 36,207
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APPLICANT: Rogers
                                                                                                                                                                                                                                                                            TELEFAX: (617)227-5941
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Klapper, David G. APPLICANT: Rafnar, Thorunn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Kuo, Mei-chang
TITLE OF INVENTION: Allergenic Proteins From Ragweed
                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: IM
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
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STATE: Massac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/
FILING DATE: December 29,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET:
                                                                                                                                                                                                                            TYPE: nucleic acid
STRANDEDNESS: sing
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                                                                                                                                          LOCATION:
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60 State Street
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                                                                                                                                                                                                                            single
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ber 29, 1993
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   Conservative: Mismatches: Indels:
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US-10-010-050A-2 (1-346) x US-08-175-069A-73 (1-1349)
RESULT 8

US-08-461-939B-73

; Sequence 73, Application US/08461939B

; Patent No. 6335019

; GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               225 ArgThrPheAsnLysLeuAlaGluPheGly------AlaGluPheLysAsnIleGlu 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        281 TyrProPheLysProHisLeuProThrLysGluPheLeuLeuSerLeuLeuGlnIlePhe 300
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CysPro-----ThrGlySerProIleProValMetGluGlyAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTCCAGCTGAACCA------GGAGAAGCCGTTCTAAGACTCACTAGTAGTGCT 1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ThrAsnTyrThrArgIlePheLeuTyrSerGlyGluProThrTyrLeuGlyAsnGluThr 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----AAAAATGTCTTÄGCGAGGACTGGTACTGGCAACGCÄGÄGTCGATGTCGTGGAAC 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Thr------------TrpPheAspSerTyrAspCysSerLysPheValLeu 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACATGTTCACCGATCACGTTGACCAAAGAATGCCTAGATGTAGATTTGGGTTTTTCCAA 855
                                                                                                                                                                                                                                                                                                                    TyrAsn-----PheGluTyrTrpPheLeuProMetLysPheProPheIleLysIle 329
                                                                                                                                                                                                                                                                                                                                                                            GGTGTACTCTCATGCCATCAAGGAGCACCTTGCTAAGCACCTGGCCAATTCCTAAGCTTT 1221
                                                                                                                                                                                                              ThrTyrGluGluIleProLeuProIleArgAsnLysThrLeu 343
                                                                                                                                                                                                                                                                       TATAATAATCATAAATACTTATTTTATTTTATT-----
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                                                                                                                                                                    -CCATTACGTTCAAGTACTCTA 1293
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                                                                                                                                                                                                                                                                                  -TTTGATATT 1263
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8 B 8	B 55 B	-10-	Alignment Pred. No. Score: Percent S Best Loca Query Mat DB:	CC CC CC SI PF F SI SI SI SI SI SI SI SI SI SI SI SI SI	AP AP TI TI CO
98 LeuGlyHigLeuLysIleMetHigAspAlaIleGlyPheArgSerThrLeuThrGlyPheArg.:::		010-050A-2 (1-346) x US-08-461-939B-73 (1-1349) 65 CymproThrGlySerProIleProValMetGluGlyAsp	nment Scores: 0.96 Length: 1349 e: 90.50 Matches: 68 ent Similarity: 32.17% Conservative: 33 Local Similarity: 21.66% Mismatches: 120 Indels: 93 y Match: 4.70% Indels: 93 Gaps: 16	CIVY: BOSCOM STATE: MASSACHUSELTS COMMUTER: USA ZIP: 02109-1875 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/NS-DOS OPERATING SYSTEM: PC-DOS/NS-DOS OPERATING SYSTEM: PC-DOS/NS-DOS SOFTWARE: IBM PC compatible OPERATING SYSTEM: VS-COMPATA: APPLICATION NUMBER: US 08/464,000 FILING DATE: PAPPLICATION NUMBER: US 08/290,448 FILING DATE: 05-UN-1995 APPLICATION NUMBER: US 08/290,448 FILING DATE: 15-AUG-1994 APPLICATION NUMBER: US 07/529,951 FILING DATE: 15-AUG-1994 APPLICATION NUMBER: US 07/529,951 FILING DATE: 15-AUG-1994 APPLICATION NUMBER: US 07/325,365 FILING DATE: 15-AUG-1994 APPLICATION NUMBER: US 07/325,365 FILING DATE: 17-AWR-1999 ATTORNEY/AGENT INFORMATION: NAME: Amy E. MANDÉRSOULE RESENUE/NOCKET NUMBER: 1M-018CNDV TELEPHONE: (617)227-74400 TELEPHONE: (617)227-74400 TELEPHONE: (617)242-4214 INFORMATION FOR SEQ ID NO: 73: SEQUENCE CHARACTERISTICS: LENGTH: 1149 Dase pairs TYPE: nucleic acid STRANDEDNESS: single TOPOLOGY: Linear MOLECULE TYPE: CDNA FEATURE: NAME/KEY: CDS LOCATION: 1.1323 08-461-939B-73	H SOOF FINIT

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US-08-464-000-73
                                                                                                                                                                                                                                                                                                                                                 Sequence 73, Application Patent No. 6335020
                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Rogers
APPLICANT: Klappe:
                                                                                                                                                                                                                                               APPLICANT:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                          APPLICANT: Kuo, Mei-chang
TITLE OF INVENTION: Allergenic
NUMBER OF SEQUENCES: 93
                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD, LLP
                                                                      COUNTRY: USA
ZIP: 02109-1875
                                                                                                                                  CITY: Boston
                                                                                                                                                        STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1222
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                685 TCACACGTG----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ||| :::||| ATTCCAGCTGAACCA------GGAGAAGCCGTTCTAAGACTCACTAGTAGTGCT 1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TyrpropheLysproHisLeuProThrLysGluPheLeuLeuSerLeuLeuGlnIlePhe 300
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTATACTCAGCCAAGGGAACAGATTCTTCGCCCCCGATGATATCATCAAG------
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AspAlaValIleValHisLys------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ServalPheGlyProThrGly---AsnLysThrLeuGlyLeuAlalleLysArgPheTyr 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ThrAsnTyrThrArgIlePheLeuTyrSerGlyGluProThrTyrLeuGlyAsnGluThr 261
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATAATAATCATAAATACTTATTTTATTTATT-
                                                                                                                  Massachusetts
                                                                                                                                                      60 State Street
                                                                                                                                                                                                                                                                 Rogers, Bruce
Klapper, David G.
Rafnar, Thorunn
                                                                                                                                                                                                                                                                                                                                                                       US/08464000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TyrGluThrTrpAsnValLysAlaSerProGluLysGlyAlaGlu
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCATTACGITCAAGTACICIA 1293
                                                                                                                                                                                                                                   Peptides from Ragweed Pollen
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Best Local Similarity:
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DB:
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FILING DATE: 29-MAY-1990
APPLICATION NUMBER: US 07/325,365
FILING DATE: 17-MAR-1989
ATTORNEY/AGENT INFORMATION:
NAME: Amy E. MANDETSATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: IMI-018CN2
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (617) 227-594: INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 05-JUN-
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
FILING DATE: 15-AUG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Release #1.0, Version CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/464,000 FILING DATE: 05-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 1349 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            526 TGTCCAGGAGGCATGATTAAGTCCAACGATGGTCCACCAATTTTAAGACAACAAGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              586 GGTGATGCTATAAATGTTGCTGGTAGTTCACAAATATGG----
                                                                                                                                                                                                                                                                                                                   138 ArgProGluMetAspAlaProPheTrpCysAsnGlnGlyAlaAlaCysPhePheGluGly
                                                                                                                                                                                                                                                                                                                                                                                                                                     625 ATCGACCÁTTGCTCGCTCAGTAAGGCTTCCGATGGGCTGCTCGATATCACCCTCGGCAGC 684
                                                  856
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                                                                                      197
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                                                                                                                                                                                                                                                                                                                                                                                           AsnTyrThrMetGluTrpTyrGluLeuPheGlnLeuGlyAsnCysThrPheProHisLeu 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LeuGlyHisLeuLysIleMetHisAspAlaIleGlyPheArgSerThrLeuThrGlyLys 117
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                                                                                                                                                                                                                                                                                                                                                               TCACACGTG---
                                                GTCGTTAACAACAACTACGACAGATGGGGAACGTACGCCATCGGTGGTAGCTCGGCCCCA 915
                                                                                                                          ÄÄCÄTGTTCACCGATCACGTTGACCAAAGAATGCCTAGATGTAGATTTGGGTTTTTCCAA
                                                                                                                                                              AsnMetPheAsnGlnMetAlaLysTrpValLysGlnAspAsnGluThrGlyIleTyr---
                                                                                                                                                                                                        GCTGATGACACCCATTATCAAGATAAAGGCATGCTA-
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32.17%
21.66%
4.70%
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                                                                                      ŢyrGluThrTrpAsnValLysAļaSerProGluLysGlyAļaGlu
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            --TrpPheAspSerTyrAspCysSerLysPheValLeu 224
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Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
Conservative:
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68
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US-08-480-528A-11
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: Flop PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Vi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No. 5652118
GENERAL INFORMATION:
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                                                                                INFORMATION FOR SEQ ID NO:
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APPLICANT:
APPLICANT:
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ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES
STREET: 45 SOUTH STREET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: RUBGER, DAVID C.
APPLICANT: PANG, ROY H.L.
APPLICANT: COHEN, CHARLES M.
TITLE OF INVENTION: OP3-INDUCED MORPHOGENESIS
                            SEQUENCE CHARACTERISTICS:
LENGTH: 6418 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/480,528A
FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
                                                                                                                          NAME: FENTON ESG., GILLIAN M.
REGISTRATION NUMBER: 36:508
REFERENCE/DOCKET NUMBER: CRP-076FW
TELECOMMUNICATION INFORMATION:
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COPOLOGY:
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KUBERASAMPATH, THANGAVEL
RUEGER, DAVID C.
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(617) 248-7100
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Best Local Similarity:
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FEATURE:
NAME/KEY: misc_fea
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LOCATION: 1..6361
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                                                                                                                                                                                                   APPLICANT: PANG, ROY H.L.
APPLICANT: COHEN, CHARLES M.
TITLE OF INVENTION: OP3-INDUCED MORPHOGENESIS
TUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
COMPUTER READABLE FORM:
MEDIUM TYPE: Flopy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/479,666
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TNNG, ROY H.L.
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OZKAYNAK, ENGIN
KUBERASAMPATH, THAN
RUEGER, DAVID C.
                                                                                                                                 USA
                                                                                                                                                                                                 PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --AsnGlyThrLeuValGlnValAla-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlyIleAspAspValHisTrpLysGlu------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ---ThrIleSerGlyAsnMetPheAsnGlnMet----
                                                                                                                                                                                                                                                                                                                      THANGAVEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGTCGTGGTGGAAAGAGAGCCTCAA
                                    #1.30
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                                                  US-10-010-050A-2 (1-346) x US-08-479-666-11 (1-6418)
                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                      Pred. No.:
                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                               ; LOCATION: 6116..63
; OTHER INFORMATION:
US-08-479-666-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (508) 435-6951
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 6418 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
NAME/KEY: misc_feature
LOCATION: 884..885
OTHER INFORMATION: /note
OTHER INFORMATION: POST:
                                                                                                                                                                                                                                                                                                                         FEATURE:

NAME/KEY: exon
LOCATION: 2902..298
OTHER INFORMATION:
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NAME/KEY: misc feature

LOCATION: 1..6361

LOCATION: /no
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NAME: FENTON ESQ., GILLIAN M.
REGISTRATION NUMBER: 36,508
REFERENCE/DOCKET NUMBER: CRP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: (508) 435-9001
                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION: 1834..1835
OTHER INFORMATION: /note= "A
OTHER INFORMATION: POSITIONS
FEATURE:
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NAME/KEY:
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NAME/KEY:
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NAME/KEY:
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CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: exon
LOCATION: 1088..1277
OTHER INFORMATION: /
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OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: exon
LOCATION: 1883..2077
OTHER INFORMATION: /
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LOCATION: 1350..1814
OTHER INFORMATION: /
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                    NAME/KEY: exon
LOCATION: 3507..30
OTHER INFORMATION:
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 532
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TCCTGGGCCTGGCGCTATGCG----CGCTGGGCGGGGGGGGGCCCCGGGCCTGCGACCCCCGC 588
                         SerTrpCysTrpAlaLeuAlaLeuLeuTrpLeuAlaValValProGly--
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29.97%
21.14%
4.70%
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note=
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                                                                                                                                                                                                                 "EXON SEVEN"
                                                                                                                                                                                                                                                                        "EXON SIX"
                                                                                                                                                                                                                                                                                                                                                                                                                                              GAP OCCURS BETWEEN
1834 AND 1835 IN THIS SEQUENCE"
                                                                                                  Conservative: Mismatches: Indels:
                                                                                Gaps:
                                                                                                                                            Length: Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ONE "
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                                                                                      6418
67
28
97
126
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RESULT 12
PCT-US93-10520-11
                                                                                                                                                                                       Sequence 11, Application PC/TUS9310520 GENERAL INFORMATION:
STREET: 45 CONTROL CITY: HOPKINTON GTATE: MA
                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: CREATIVE BIOMOLECULES, INC
                                                                                                                                                TITLE OF INVENTION:
                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1035
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          166
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    119 yrThrMetGluTrpTyrGluLeuPheGlnLeuGlyAsnCysThrPheProHisLeuArgP 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  928 AACAAACGTTTGCACTAAATGAAGCCGGCCCCACCCAGGCCTCCCTGGGTCCGCTCCAC- 936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              808
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              649
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCCAGAGCCCGAGCCATTCTGAGTGCCAGCCCAGCGCTGCTTTGTCTTCTAGTGGAGCG 1094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----CTTGAGTGGTGGC-TGG-----GGGCGGTGGCTCACACCAGCTCTGCCCC
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                                                                                                                                                                                                                                                                                                                                            uLysGlyAlaGluThrTrpPheAspSerTyrAspCysSerLys 221
                                                                                                                                                                                                                                                                                                                                                                                            AAGGCAGCCCAGCAGG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                 llysGlpAspAsnGluThrGlyIleTyrTyrGluThrTrpAsnVallysAlaSerProGl 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGGIGCCTTCCCCTTGGCCCGGGTGCCCACCTAACCCCCACCTCACAGTCTCATGGTC 1334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGACCGTGCCCTGGGCCACCAGGAGCCCCATTGGAAGGAGTTCCGCTTTGACCTGACCCA 1154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  roGluMetAspAlaProPhe-TrpCysAsnGlnGlyAlaAla-CysPhePheGlu---- 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCACCTGCTCAACAGGACCCTCCACGTCAGCATGTTCCAGGTGGTCCAGGAGCAGTCCAA 1274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATCCCGGCTGGGGAGGCGGTCACAGCTGCGGAGTTCCGGATTTACAAGGTGCCCAGCAT 1214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----AsnGlyThrLeuValGlnValAla------
                                                             45 SOUTH STREET
                                                                                                                                                  OP3-INDUCED MORPHOGENESIS
                                                                                                                              13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -GlyIleAspAspValHisTrpLysGlu-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ThrIleSerGlyAsnMetPheAsnGlnMet------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----ProvalProTyrLysArgPheAspPheArgPro 52
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                                                                                                                                                                                                                                                                                                                                                                                              ----GAGTCGTGGTGGAAAGAGAGCCTCAA 1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----AlaLysTrpVa 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --GCGCGCCAC 693
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TELEPHONE: (508)435-9001
INFORMATION FOR SEQ ID NO: 11
SEQUENCE CHARACTERISTICS:
LENGTH: 6418 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 07/
FILING DATE: 30-AUG-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/
FILING DATE: 31-UUL-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/
FILING DATE: 31-UIL-1992
FILING DATE: 31-UIL-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
PRIOR APPLICATION UNBER: US 07/753,059
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APPLICATION NUMBER: US 0
FILING DATE: 11-MAR-1991
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: CR
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 31-JUL-1992
ATTORNEY/AGENT INFORMATION:
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PRIOR APPLICATION DATA:
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ZIP: 01748
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/US93/10520
                                                                                                                                                                                                                               NAME/KEY: exon
LOCATION: 1088..1277
OTHER INFORMATION: /:
                                                                                                                                                                                                                                                                                                          NAME/KEY: misc feature LOCATION: 884.885
OTHER INFORMATION: /not OTHER INFORMATION: Posi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                     NAME/KEY: misc_feature
LOCATION: 1334..1835
OTHER INFORMATION: /note= "A Gap Occurs Between
OTHER INFORMATION: Positions 1834 and 1835 in this Sequence"
                                                                                                                                                            NAME/KEY: exon
LOCATION: 1350..1814
OTHER INFORMATION: //
                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: exon LOCATION: 1..8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: /note= "HOP-2 genomic sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc feature LOCATION: 1..6361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION:
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LOCATION: 1883..20 OTHER INFORMATION:
                                   NAME/KEY:
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                exon
1883..2077
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
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30-AUG-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA (genomic)
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                                                                                                                                                                                                                                                                                                            /note= "A
Positions
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                                                                                                                                                                                                                                     /note=
 /note= "EXON FOUR"
                                                                                                                                                               /note= "EXON THREE"
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                                                                                                                                                                                                                                         "EXON
                                                                                                                                                                                                                                                                                                              Gap
884
                                                                                                                                                                                                                                                                                                                                                                                                       ONE
                                                                                                                                                                                                                                         TWO"
                                                                                                                                                                                                                                                                                                            Occurs Between and 885 in this
                                                                                                                                                                                                                                                                                                                Sequence"
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Percent Similarity:
Best Local Similarity:
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RESULT 13
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; Sequence 58, Application U; Patent No. 5676954; GENERAL INFORMATION: APPLICANT: Rogers, Bru; APPLICANT: Klapper, Da
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                                                                                      RESULT 14
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APPLICANT: OriGene Technologies
TITLE OF INVENTION: TBX3 GENE AND METHODS
FILE REFERENCE: 16U 104 R1
CURRENT APPLICATION NUMBER: US/10/028,272
CURRENT FILING DATE: 2001-12-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn version 3.1 SEQ ID NO 1
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LOCATION: (524)..(2695)
OTHER INFORMATION:
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Klapper, David
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DB:
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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MEDIUM TYPE: Floppy disk

COMPUTER: IEM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

OPERATING SYSTEM: PC-DOS/MS-DOS
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APPLICANT: Kuo, Mei-chang
TITLE OF INVENTION: Allergenic Proteins From Ragweed
NUMBER OF SEQUENCES: 93
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FILING DATE: March 17, 1989
ATTORNEY/AGENT INFORMATION:
NAME: Amy E. Mandragouras
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: IMI-018CI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: August 15, 1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/529,951
FILING DATE: May 29, 1990
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US-08-290-448A-58
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                                                                                                                                                                                                                                                                                                                                               Patent No. 5698204
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                 Sequence 58,
ZIP: 02109-1875
COMPUTER READABLE FORM:
COMPUTER: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/290,448A
                                                                                                                                                                                                         NUMBER OF SEQUENCES: 93
CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
                                                                                                                                                                                                                                                           APPLICANT: Kuo, Mei-chang
TITLE OF INVENTION: Allergenic Proteins From Ragweed and Uses
                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                           STATE:
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CITY: Boston
                                                                                                                                   COUNTRY:
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                                                                                                                                                         Massachusetts
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                                                                                                                                                                                         60 State Street, Buite 510
                                                                                                                                                                                                                                                                                             Rogers, Bruce
Klapper, David G.
Rafnar, Thorunn
                                                                                                                                         USA
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PILING DATE: August 15, 1994

PRIOR APPLICATION UNMBER: US 07/529,951

FILING DATE: MAY 29, 1990

APPLICATION NUMBER: US 07/325,365

FILING DATE: MAY 29, 1990

APPLICATION NUMBER: US 07/325,365

FILING DATE: MARCh 17, 1989

ATTORNEY/AGENT INFORMATION:

NAME: Amy E. Mandragouras

REGISTRATION NUMBER: 1MI-018CN

TRIERENCE/DOCKET NUMBER: 1MI-018CN

TRIEDSHONE: (617)227-400

TELEPAN: (617)227-490

TELEPAN: (617)227-5941

INFORMATION FOR SEQ ID NO: 58:
SEQUENCE CHARACTERISTICS:

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DB:
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Best Local Similarity:
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STRANDEDNESS: single
TOPOLOGY: linear
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                                                                                                                                                                                       AACATGTTCACCGATCACGTTGACCAAAGAATGCCTAGATGTAGATTTGGGTTTTTCCAA 834
                                                ACTATACTCAGCCAAGGGAACAGATTCTTCGCCCCCGATGATATCATCAAGGAAAATGTC 954
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1255 TTACGTTCAAGTACTCTA 1272	TTACGT	1255	DЬ
IleArgAsnLysThrLeu 343	IleArg/	338	S
TTCCA 1254	TATTTTATT	1225	Db
ProMetLysPheProPheIleLysIleThrTyrGluGluIleProLe	TrpPheI	318	Ş
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AsnLysThrLeuGlyLeuAlaIleLysArgPheTyrTyrProPheLysProHisLeuPro 288	AsnLysT	269	Ş
CTCCCATCCGGTCTGATCCAGTGCTAACCCCTGAGCAA	CTCCCAT	1042	Dp.
LeuTyrSerGlyGluProThrTyrLeuGlyAsnGluThrSerValPheGlyProThrGly 268	LeuTyrS	249	Ş
1015 GACTTGCTTGAAAATGGTGCT1011	GACTTGC	1015	В
LysLeuAlaGluPheGlyAlaGluPheLysAsnIleGluThrAsnTyrThrArgIlePhe	LysLeuA 	229	8
955 TTAGCGAGGACTGGTACTGGCAACGCAGAGTCGATGTCGTGGAACTGGAGAACAGATAAA 1014	TTAGCGA	955	ğ

Search completed: April 25, 2004, 05:50:25 Job time : 148.853 secs

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Post-processing: Minimum Match 0%
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Listing first 45 summaries
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-DB=N_Geneseq_29Jan04 -QFMT=fastap_SUFFIX=rng_-MinwArCH=0.1 -LOOPFCL=0
-DB=N_Geneseq_29Jan04 -QFMT=fastap_SUFFIX=rng_-MinwArCH=0.1 -LOOPFCL=0
-LOOPEXT=0 -UNITS-bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE-pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15
-MODE=LOCAL -QUTFWT=pto -NORM-ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-MODE=LOCAL -QUTFWT=pto -NORM-ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER-US10010050 @CGN 1 1819 @runat 22042004 113203 27539 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -MAIT -DSPELOCE=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPDEXT=0.5 -FGAPOP=6
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPDEXT=0.5 -FGAPOP=6
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score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
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cc human protein. The gene number, and the clone it is derived from, are detailed in the descriptor line. The gene can be used to generate fusion proteins by linking to the gene to human immunoglobulin Fc portion cc [e.g. AAZ24802] for increasing the stability of the fused protein as cc compared to the human protein only. The invention relates to 95 novel genes and their fragments (nucleic acid sequences; AAZ24811-Z24907; amino cc acid sequences AAY41308-Y41404) which are useful for preventing, treating cc or ameliorating medical conditions e.g. by protein or gene therapy. Also, cc pathological conditions can be diagnosed by determining the amount of the new polymentes in a sample or by determining the presence of mutations cc in the new polymentelectides. Specific uses are described for each of the cc in the new polymelectides. Specific uses are described reach of the cc in the new polymelectides, based on which tissues they are most highly expressed in (see AAZ24811 for described uses)
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11-JAN-2000; 2000JP-00118774.
02-MAY-2000; 2000JP-00183765
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Reiger syndrome; immunoassay; detection; anti-idiotypic
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                    New secreted polypeptide, zaig46, and its fragments, related fusion proteins - used for diagnosis and treatment of thyroid disorders or diseases involving genes on chromosome 13.
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This invention describes the isolation of a novel human secreted protein, zsig46 encoded by a gene on chromosome 13 which is mainly expressed in c the thyroid. This product can be used to study secretion of proteins from c cells and also to treat or prevent deficient expression of zsig46, which c may be associated with thyroid diseases (e.g. hypothyroidism, Graves' c involve genes in the same region of chromosome 13 (e.g. Hirschsprung's c disease, neuronal ceroid-lipofucinosis, Wilson disease and Reiger c syndrome). Antibodies and other binding proteins, are used as immunoassay c reagents to detect zsig46 or cells expressing it, e.g. for assessing thyroid function to produce anti-idiotypic antibodies, for affinity purification of zsig46, to screen expression libraries, to neutralise zsig46 activity, and to deliver toxins, radioisotopes etc. for therapeutic or diagnostic purposes. Agonists of the product can be used to promote growth, differentiation and proliferation of specific cell c toprose. e.g. for treating (extra)thyroid diseases or as additive to cell
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ma T, Nagai
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clones. 830 CDNA molecules encoding a human protein have been isolated and nucleotide sequences of 5'- and 3'-ends of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cDNA

The invention relates to primers for synthesising full length

SEQ ID NO 1884; 1380pp + Sequence Listing;

English

CDNA

Example

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Score:
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                                                                                                                                                                                                                           heAsnGlnMetAla-LysTrpValLysGln---AspAsnGluThrGlyIleTyrTyrGlu
                                                                                                                                                                                                                                                                             ValHisTrpLysGluAsnGlyThrLeu-ValGlnValAlaThrIleSer-GlyAsnMetP
                                                                                                                                                                                                                                                                                                                    ATGGATGCCCCTTTCTGGTGTAATCAAGGCGCTGCCTGCTTTTTTGAGGGAATTGATGAT
                                                                                                                                                                                                                                                                                                                                     MetAspAlaProPheTrpCysAsnGlnGlyAlaAlaCysPhePheGluGlyIleAspAsp
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                                                                                                                                                                 -ThrTrpAsnValLysAlaSerProGluLys---GlyAlaGlu 211
                                                                                                                                           AACATGGAATTTTAAAAGCCANCCCAANAAAAANGGGGCAAAA 694
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The invention relates to primers for synthesising full length cDNA clones. 830 cDNA molecules encoding a human protein have been isolated and nucleotide sequences of 5'- and 3'-ends of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cDNA libraries that were synthesised by the oligo-capping method. The primers enable the production of the full length cDNA easily without any special methods. The present sequence is the nucleotide sequence of the 5'-end of a cDNA provided in the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in CD-ROM format directly from EPO
                                                                                                                                                                                                                                                                                         WPI;
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11-JAN-2000; 2000JP-00118774
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; full length cDNA; cDNA synthesis; oligo-capping;
Sequence 697 BP; 183 A; 160 C; 186
                                                                                                                                                                                                                    Claim
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genetic manipulation.
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Nagai K, Kojima
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Otsuki T, Ko
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LeuLysIleMetHisAspAlaIleGlyPheArgSerThrLeuThrGlyLysAsnTyrThr

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GluValPheArgLeuGlnAlaProValTrpGluPheLysTyrGlyAspLeuLeuGlyHis

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XX AAIZ
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26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
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The present invention relates to human single exon nucleic acid probes (SENP). The present sequence is one such probe. The SENPs are derived from human HeLa cells. The SENPs can be used to produce a single exon microarray, which can be used for measuring human gene expression in a sample derived from human cervical epithelial cells. By measuring gene expression, the probes are therefore useful in grading and/or staging of diseases of the cervix, notably cervical cancer. Note: The sequence dara for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
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                                                                                                                                                                                                                                                                                                                  genome-derived single exon nucleic acid probes useful expression in human cervical epithelial cells.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; 2000US-0207456P;
; 2000US-00608408;
; 2000US-00632366;
; 2000US-023468P;
; 2000US-0236359P;
; 2000GB-00024263.
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26-MAY-2000; 2000US-0207456P.
30-JUN-2000; 2000US-00608408.
03-AUG-2000; 2000US-00632366.
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27-SEP-2000;
04-OCT-2000;
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                                                             IleValHisLysGlnPheTyrLeuPheTyrAsnPheGluTyrTTpPheLeuProMetLys
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                                                                                                                                                                                                                                                                                 The present invention relates to single exon nucleic acid probes (The present sequence is one such probe. The probes are useful for producing a microarray for predicting, measuring and displaying year expression in samples derived from human placenta. The probes are for antenatal diagnosis of human genetic disorders
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                                    TTAAGGACCTTTAACAAGTTGGCTGAATTTGGAGCAGAGTTCAAGAACATAGAAACCAAC
                                                GCCAGCCCAGAAAAGGGGGCAGAGACATGGTTTGATTCCTACGACTGTTCCAAATTTGTG
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03-AUG-2000;
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                    The present invention relates to single exon nucleic acid probes for measuring human gene expression in a sample derived from human heart. The present sequence is one such probe. The probes may be used for predicting, measuring and displaying gene expression in samples derived from the human heart via microarrays. By measuring gene expression, the probes are useful for predicting, diagnosing, grading, staging, monitoring and prognosing diseases of the human heart and vascular system e.g. cardiovascular disease, hypertension, cardiac arrhythmias and congenital heart disease. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
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Percent Similarity:
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Query Match:
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  RESULT 11
AAK44992
ID AAK44
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AC AAK44
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04-FEB-2000; 2000US-0180312P.
26-MAY-2000; 2000US-0207456P.
30-JUN-2000; 2000US-00608408.
03-AUG-2000; 2000US-00632366.
                                                                                                                                                                                                                                                                                               Human;
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                                                                                                                                                                                                                                                                           cancer; leukaemia; lymphoma;
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27-SEP-2000;
04-OCT-2000;
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                                                                                                                               IleValHisLysGlnPheTyrLeuPheTyrAsnPheGluTyrTrpPheLeuProMetLys
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  standard;
                                                    SerGlyLeu
                                                                              TTCCCTTTTATTAAAATAACATATGAAGAAATCCCTTTACCTATCAGAAACAAAACACTC
                                                                                         ATTGTGCACAAACAGTTCTATTTGTTTTATAATTTTGAATATTGGTTTTTACCTATGAAA
                                                                                                                                                         SEQ ID NO 19549; 658pp + Sequence Listing;
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2000US-0236359P.
2000GB-00024263.
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Mismatches:
Indels:
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03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
04-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; brain
Alzheimer's
                                                                                                                                                                                                                                                                                   The present invention provides a number of single exon nucleic acid probes which are derived from genomic sequences expressed in the human brain. They can be used to measure gene expression in brain cell samples which may enable the diagnosis and improved treatment of nervous system diseases such as Alzheimer's disease, multiple sclerosis, schizophrenia, epilepsy and cancers. The present sequence is one of the probes of the
                                                                                                                                                                                                                                                                                                                                                                                                                                Penn
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26-MAY-2000;
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                                                                                                                                                                                                                                                                                                                                                           Example 4;
                                                                                                                                                                                                                                                          Sequence 494 BP;
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                                                                                                                                                                                        Match:
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                                                                                                                   GCAAAGTGGGTGAAACAGGACAATGAAACAGGAATTTATTATGAGACATGGAATGTAAAA
                                                                                                                              AlaLysTrpValLysGlnAspAsnGluThrGlyIleTyrTyrGluThrTrpAsnValLys
                                                 AlaSerProGluLysGlyAlaGluThrTrpPheAspSerTyrAspCysSerLysPheVal
                                                                              GCCAGCCCAGAAAAGGGGGCAGA
TATACAAGAATATTTCTTTACAGTGGAGAACCTACTTATCTGGGAAATGAAACATCTGTT
           TyrThrArgTlePheLeuTyrSerGlyGluProThrTyrLeuGlyAsnGluThrSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                 Hanzel DK,
                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 19031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; 2000US-0180312P.

2000US-0207456P.

2000US-0060840B.

2000US-00532366.

; 2000US-0234687P.

; 2000US-0236359P.

; 2000US-0236359P.

2000US-0024263.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            disease;
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                                                                                                                                                                                                                                                                                                                                                                                         nucleic acid
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lisease; multiple sclerosis; schi
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epilepsy; cancer;
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HESULT 13
HES44658
LD ABS44658
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The invention relates to a single exon nucleic acid probe (SENP) (I) for measuring human gene expression in a sample derived from human adult liver, comprising one of 13109 defined nucleotide sequences given in the specification (or complements) fragments). The probe hybridises at high stringency to a nucleic acid molecule expressed in the human adult liver. (I) may be used for predicting, measuring and displaying gene expression in samples derived from human adult liver. The genes identified may be involved in genetic liver diseases such as cirrhosis, hyperlipoproteinaemia, hyperlipidaemia and hypercholesterolaemia which is associated with coronary heart disease. ABS25011-ABS51005 represent human liver single exon nucleic acid probes of the invention. Note: The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; single exon nucleic acid probe; liver; cirrhosis;
hyperlipoproteinaemia; hyperlipidaemia; hypercholesterolaemia;
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21-SEP-2000;
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30-JUN-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-FEB-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTGTGCACAAACAGTTCTATTTGTTTTATAATTTTTGAATATTTGGTTTTTACCTATGAAA
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2000US-0207456P,
2000US-0060840B,
2000US-00632366,
2000US-0234687P,
2000US-0236359P,
2000US-00024263.
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                                                                                                                                                                                                                                                                                                           ID NO 19648; 658pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           494
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DR;
                                                                                                                                                                                                                                                                                                                                                                                          acid
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                                                         Human; ds; single exon probe; asthma; lung cancer; COPD; ILD; chronic obstructive pulmonary disease; interstitial lung disease; familial idiopathic pulmonary fibrosis; neurofibromatosis; tuberous sclerosis; Gaucher's disease; Niemann-Pick disease; Hermansky-pudlak syndrome; sarcoidosis; pulmonary haemosiderosis; pulmonary histiocytosis; lymphangioleiomyomtosis; Karagener syndrome; pulmonary alveolar proteinosis; fibrocystic pulmonary dysplasia; pulmonary ciliary dyskinesis; pulmonary hypertension;
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complements or the 12387 open reading frames derived from the 1208. Also included are a microarray comprising the novel set of probes which hybridise at high stringency to a nucleic clearing for movel set of probes which hybridise at high stringency to a nucleic clearing the movel set of probes collection of detectably labeled nucleic acids derived from human lung comprising (a) contacting the array with a collection of detectably labeled nucleic acids derived from human lung comprising (a) contacting the array with a carray; identifying exons in a subaryotic genome, comprising (a) algorithmically predicting at least one exon from genomic sequences of the enkaryote; and (b) detecting specific hybridisation of detectably comprising (a) identifying exons to a single exon probe. Comprising (a) identifying exons from genomic sequence by the method above and (b) measuring the expression of each of the exons in the above mentioned microarray; assigning exons to a single exon to a single exon probe and to a comprising (a) identifying exons from genomic sequence by the method comprising (a) identifying exons from genomic sequence by the method comprising of the exons in the tissues and/or cell types using hybridisation to a single exon of 12011 sequences, mentioned in the specification, where a common pattern of the exons should be assigned to a single gene; a peptide comprising one of 12011 sequence, mentioned in the specification, or encoded by the correspondence, chronic obstructive pulmonary disease (COPD), interestital lung disease (IID), familial idiopathic pulmonary fibrosis, neurofibromatosis, cut as gener as such as asthma, lung cancer, chronic obstructive pulmonary haemosiderosis, neurofibromatosis, histocytosis, lymphangioleiomyomotosis, Niemann-pick disease, Hermansky-cut and the sequence is a single exon probe open reading frame of the company hypertension and hyaline membrane disease. The cut in the specification, but was obtained in electronic format directly companied to the companied of the sequences.
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27-SEP-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nucleic acid probes for measuring gene expression in a sample derived from human lung comprising single exon nucleic acid probes having one 12614 nucleic acid sequences mentioned in the specification, or their complements or the 12387 open reading frames derived from the 12614
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                                                                                         Jacobs K,
Spaulding
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SUMMARIES

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/tissue_type="PIACENTA COT 25-NORMALIZED"
/clone=Tib="Homo sapiens PIACENTA COT 25-NORMALIZED"
/note="Tst strand cDNA was primed with a NotI-oligo(dT)
/note="Tst strand cDNA was primer. Five prime end enriched, double-strand cDNA was
primer. Five prime end cloned into the Not I and EcoR V
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BX331615 Homo sapiens NEUROBLASTOMA COT 10-NORMALIZED Homo sapiens
cDNA clone CS0DB009YC01 5-PRIME, mRNA sequence.

BX331615 EX331615
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BP 191 91006 EVRY cedex - France
Email: seqrefægenoscope.cns.fr Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238.f
more information about this cluster, see
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Mammalia; Eutheria;
1 (bases 1 to 923)
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/clone="CSODB009YC01"
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96.8%;
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BX342662.1
EST.
Contact: Genoscope
Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238.f
more information about this cluster, see
                                                                                                                                                   Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertification; Butheria; Primates; Catarrhini; Holdandalia; Butheria; Primates; Catarrhini; Holdandalia to 1077)
Li,W.B., Gruber, C., Jessee, J. and Polayes, D. Full-length cDNA libraries and normalization unpublished (2001)
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BX342662 Homo sapiens B CELLS (RAMOS CELL LINE) COT 25-NORW
Homo sapiens cDNA clone CSODL004YP03 5-PRIME, mRNA sequence.
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cgi-bin/cluster.cgi?seq=CSODL004CH02QP1&cluster=7238.f. Contact Feng Liang Email: filang&lifetech.com URL: http://fulllength.invitrogen.com/ InVitroGen Corporation 1600 Faraday Avenue Genoscope sequence ID: CSODL004CH02QP1. Location/Qualifiers
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Query Match 69.1%; Score 749.4; DB 12; Length 869; Best Local Similarity 97.1%; Pred. No. 1.7e-153; Best Local Similarity 97.1%; Pred. No. 1.7e-153; Matches 827; Conservative 0; Mismatches 17; Indels 8; Gaps 6; Matches 827; Conservative 0; Mismatches 17; Indels 8; Gaps 6; 14 GGGCAGGAGGTAGACACGGCACAGGGCGCCGAGATGCGGCGGGGGGGG	/clone="IMAGE:4996891" /cell line="MGC36" /lab host="DH108" /lab host="DH108" /clone lib="NHH_MGC_10" /clone lib="NHH_MGC_10" /note="Organ: cervix; Vector: pCMV-SPORT6; Site_1: Not:; /note_2: Sall; Cloned unidirectionally. Primer: Oligo dT. Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.5 kb. Library prepared by Life Technologies."	rce	http://image.llnl.gov plate: LLAM11023 row: a column: 20 High quality sequence stop: 843. FFATTIBES Location/Qualifiers	by: Incyte Genomics, Inc. ncyte Genomics, Inc. MGC clone distribution in .A.G.E. Consortium/LLNL a		REFERENCE 1 (bases 1 to 869) AUTHORS NIH-MGC http://mgc.nci.nih.gov/. TITLE National Institutes of Health, Mammalian Gene Collection (MGC) JOURNAL Unpublished (1999)	X S	ACCESSION BI090566 US:14508896 VERSION BI090566.1 GI:14508896 KEYMORDS EST.	RESULT 4 B1090566 B1090566 B1090566 B1090566 B1090566 B1090566 B1090566 B1090566 B1090566 B1090566 B1090566 B1090566 B1090566 B1090566 B1090566 B1090566 B1090566 B1090566	977		8 6 2 8 5 3		1
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Mammalia; Eutheria; Primates; Catarrnin; Hominicae 1 (bases 1 to 924) NIH-MGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Colle Unpublished (1999) Contact: Robert Strausberg, Ph.D. Email: cgapbs-remail.nih.gov Email: cgapbs-remail.nih.gov Email: cgapbs-remail.nih.gov CONA Library Preparation: Invitrogen Corp. CDNA Library Arrayed by: The I.M.A.G.E. Consortium DNA Sequencing by: Agencourt Bioscience Corporatio	CA488543.1 GI:24950702 EST. Homo sapiens (human) Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;		858 AGGAAACAAGAC 869	847 AGGAAACAAGAC 858	798 TCTTTACAGTGGAAGAACCTACTTATCTGGGAAAATGAAACCATCTGTTTAGGGGCAACC 857	790 TCTTTACAGTGG-AGAACCTACTTATCTGGGAAATGAAACATCTGTTTTTTGGGCCAAC 846	732 AGTIGGCTGAA-TTTGGAGCAGAGTTCAAGAACA-TAGAAACCAACTATACCAGAAXIXII /87		72	614 GACAATGAAACAGGAATTTATTATGAGACATGGAATGTAAAAGCCAGCC		554 GTTCAAGTAGCAACTATATCAGGAAACATGTTCAACCAAATGGCAAAGTGGGTGAAACAG 613	494 GGCGCTGCCTTTTTTGAGGGAATTGATGATGATGCACTGGAAGGAA	49	9 TTCAGAAGTACATTAACTGGCAAGAAGTACACAATGGAATGGTATGATGATGTATTATTCTGGTGTAATCAA	374 TTCAGAAGTACATTAACTGGCAAGAACTACACAATGGAATGGTATGAACTTTTTCCAACTT 433	314 TGGGAATTTAAATATGGAGACCTCCTGGGACACTTGAAAATTATGCATGC	59 CCTATCCCAGTTATGGAGGGTGATGATGACATTGAAGTTTTTCGATTACAAGCCCCCAGTA	54 CCTATCCCAGTTATGGAGGGTGATGATGACATTGAAGTTTTTCGATTACAAGCCCCAGTA		139 TCCCGGGTCTCGGGCATCCCCTCCCGGCGCCACTGGCCGGTGCCCTACAAGCGCTTTGAC 198

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Tissue Procurement: ATCC
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Note: Technologies."
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                        source
                                      Contect: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: ATCC

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAM/10105 row: g column: 19

High quality sequence stop: 693.

location/Qualifiers
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National Institutes of Health, Mammalian Unpublished (1999)
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/lab host="PH10B (phage resistant)"
/clone lib="NIH MGC B8"
/clone lib="NIH MGC B8"
/note="Torgan: small intestine; Vector: pCMV-SPORTG;
Site 1: NotI, Site 2: Sall; Cloned unidirectionally;
oligo-dr primed. Average insert size 1.767 kb. Library
enriched for full-length clones and constructed by Life
Technologies. Note: this is a NIH_MGC Library."
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/db_xref="taxon:9606"
/clone="IMAGE:4400298"
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                                                   LI Nature 420, 53-573 (2002)

E (bases 1 to 2356)

Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P.,

Adachi, J., Aizawa, K., Hanagaki, T., Hara, A., Hashizume, W.,

Fukuda, S., Furuno, M., Hanagaki, T., Hiraoka, T., Hirozane, T.,

Hayashida, K., Hayatsu, N., Hiramoto, K., Hiraoka, T., Kasukawa, T.,

Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M.,

Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M.,

Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M.,

Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, R., Ohno, M., Ohsato, N.,

Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N.,

Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N.,

Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S.,

Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A.,

Muramateu, M., and Hayashizaki, Y.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus 7 days neonate cerebellum cDNA, RIKEN full-length enriched library, clone:A730075N08 product:similar to CEROID-LIPOPUSCINOSIS NEURONAL PROTEIN 5 (CLN5 PROTEIN) [Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, ?., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system—384-format sequencing pipeline with 384 multicapillary sequencer genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Meth. En 99279253
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High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
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Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                Functional annotation of a full-length mouse cDNA collection Nature 409, 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The RIKEN Genome Exploration Research Group Phase II Team and
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Submitted (16-JUL-2001) Yoshihide Hayashizaki, The
Physical and Chemical Research (RIKEN), Laboratory
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Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokoham Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, URL:http://genome-gsc.riken.go.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Rigenomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to prepare mouse tissues.

Please visit our web site for further details.
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/mol_type="mRNA"
/strain="C57BL/6J"
/db_xref="MGI:2408405"
/db_xref="MGI:2408405"
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/clone Tib="RIKEN full-length enriched mouse
/dev_stage="7 days neonate"
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                         Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yanamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Yoneda, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, B., System-384-format RIKEN integrated sequence analysis (RISA) system-384-format
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DE Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Rodachi, J., Aizawa, K., Akimura, T., Hara, A., Hashizume, W., Fukuda, S., Furuno, M., Hanagaki, T., Hiraoka, T., Hiraoka, T., Hiraoka, T., Hayashida, K., Hayatsu, N., Hirandto, K., Hiraoka, T., Kondo, S., Konno, H., Kouda, M., Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Nakai, Y., Saito, R., Saito, H., Sakai, C., Sakai, K., Sakazume, N., Okazaki, Y., Saito, R., Saito, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sano, H., Sasaki, T., Takahashi, P., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y. Saito, M., Takahashi, P., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y.
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Analysis of the mouse transcriptome
of 60,770 full-length cDNAs
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Please visit our web site for further details.
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/db xref="FANTOM DB:D730033P03"
/db xref="MGI:2422937"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="similar to CEROID-LIPOFUSCINOSIS NEURONAL PROTEIN (CLNS PROTEIN) [Homo sapiens] (SWISSPROT|075503, evidence FASTY, 73.9%ID, 86.7%length, match=1041)"
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1201)
1 (bases 1 to 1201)
1 i,W.B., Gruber,C., Jessee,J. and Polayes,D.
1 ri,W.B., Gruber,C., Jessee,J. and Polayes,D.
1 roll-length cDNA libraries and normalization
Unpublished (2001)
On Feb 16, 2001 this sequence version replaced gi:12929467.
Contact: Genoscope
Contact: Genoscope
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BP 191 91006 EVRY cedex - France
Email: segref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238.f
more information about this cluster, see
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cgi-bin/cluster.cgi?seq=CSODIO30CEO1NP1&cluster=7238.f. Contact
cgi-bin/cluster.cgi?seq=CSODIO30CEO1NP1&cluster=7238.f. Contact
Feng Liang Email : fliang@lifetech.com URL :
Feng Liang Email : fliang@lifetech.com / InvitroGen Corporation 1600
http://fulllength.invitrogen.com/ InvitroGen Corporation 1600
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Location/Qualifiers
1. 1901
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/clone lib="Homo sapiens placenta cot 25-NORMALIZED"
/clone lib="Homo sapiens primed with a NotI-oligo(dT)
/note="ist strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
primer. Five prime end cloned into the Not I and Ecor V
digested with Not I and cloned into the Not I and Ecor V
sites of the pCMVSPORT 6 vector. Library was normalized."
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/db_xref="taxon:9606"
/clone="CSODI030YJ01"
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ORIGIN Query Match Query Match Best Local Similarity 93.0%; Pred. No. 9.3e-137; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 2; Matches 727; Conservative 0; Mismatches 51; Indels 4; Gaps 33 Qy 274 TCANGACATTGAACATTACCAATTGCAATTGCAAATTAACTGGAATTAACTGGAACTTTAAATTATGGAAATTAACTGG 393 Qy 334 CCTCCTGGGAACTTGAAAATTATGCATGATGCAATTGCAATTAACTGG 393 Qy 334 CCTCCTGGGAACTTGAAAATTATGCATGATGCAATTGCAAATTAACTGG 120 Qy 334 CCTCCTGGGAACTTGAAAATTATGCATGATGCAATTGCAAATTAACTGG 120 Qy 334 CCTCCTGGGAACTTGAAATTATGCATGATGCAATTGCAAATTAACTGG 120 Qy 334 CCTCCTGGGAACTTGAAATTATGCATGATGCATTGCAACTTGGCAACTTGAAATTAACTGG 120 Qy 334 CAAGAACTACAATGGAATGGTATGAACTTTTCCAACTTGGCAACTTGAAATTAACTGG 120 Qy 34 CAAGAACTACAATGGAATGGTATGAACTTTTCCAACTTGGCAACTTGAAATTACCCCA 453 Qy 34 CAAGAACTACACAATGGAATGGTATGAACTTTTCCAACTTGGCAACTTGAACTTTCCCCA 453 Qy 34 CAAGAACTACACAATGGAATGGTATGAACTTTTCCAACTTGGCAACTTGAAATTACCCCA 180	quence stop: 662. n/Qualifiers imm="Homo sapiens' ype="mRNA" ype="mRNA" sef="laxon:9606" "TMAGE:3894119" e_type="adenocarc: oct="pH10B (phage- lib="NHH MGC_65" "Organ: colon; Verlager: colon; Verlager: sef="colon; verlager: lib="NH MGC_65" colon; verlager: lib="liber: size 1.8	Tissue Procurement: AFCC CDNA Library Preparation: Life Technologies, Inc. CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLNAN9579 row: b column: 08	OGRANISM Homo Sapieus (America) ORGANISM Homo Sapieus (Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. REFERENCE 1 (Dases 1 to 931) 1 (Dases 1 to 931) INITHORS NIH-NGC http://mgc.nci.nih.gov/. TITLE Varional Institutes of Health, Mammalian Gene Collection (MGC) JOURNAL Unpublished (1999) COMMENT Contact: Robert Strausberg, Ph.D.	11 53 BE873 BE073 FION 60145 MRNA 10N BE873 N BE873 DS EST.	Db 597 ACAGGAAACAAGACTCTTGGTTTAGCCATAAAAGATTTTTATTACCCCTTCAAACCACAT 538 2y 905 TTGCCAACTAAAGAATTTCTGTTTGAGTCTCTTGCAAACTTTTTATTACCCCTTCAAACCACAT 538 2y 905 TTGCCAACTAAAGAATTTCTGTTGAGTCTCTTGCAAATTTTTTGATGCAGTGATTGTGCAC 954 [
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/clone_lib="NCI_CGAP_FLI"

//clone_lib="NCI_CGAP_FLI"

//note="Organ: Chondrosarcoma; Vector: pT7T3-Pac

/parmacia) with a modified polylinker; Site_l: ECOR I;

Site_2: Not I; NCI_CGAP_FLI is a normalized CDNA library

derived from a pool of mRNA obtained from 4 cell lines

from grade III chondrosarcoma tissues. The library was

constructed according to Bonaldo, Lemnon and Soares,

Genome Research, 6:791-806, 1996. First strand CDNA

synthesis was primed with an oligo-dT primer containing a

Not I site. Double stranded cDNA was ligated to an ECOR I

adaptor, digested with Not I, and cloned directionally

into pT7T3-Pac vector. The oligonucleotide used to prime

the synthesis of first-strand cDNA contains a library tag

sequence that is located between the Not I site and the

(dT)18 tail. The sequence tag for this library is

GAGGTCGGTG. The cell lines were provided by Dr. James

Martin from the University of Iowa.

THE CTITE-IN-MARC PROCESSOR AND THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE CONTROL TO THE C
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/clone="UI-H-FL1-bgb-i-07-0-UI"
/tissue_type="Cell lines"
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Pred. No. 3.1e-136;
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AK032293
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and subtraction of cap-trapper-selected cDMs to prepare full-length cDMa libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                        Group Phase I & II Team.

Analysis of the mouse transcriptome based on of 60,770 full-length cDNAs

Nature 420, 563-573 (2002)

6 (bases 1 to 2247)
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Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozane, T., Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T., Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Numzzaki, A., Murata, M., Nakamura, M., Nishi, K., Nomura, K., Numzzaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T.,
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    437
                                              261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       prepare mouse tissues.
Please visit our web site for further details.
URL:http://genome_gsc.riken.go.jp/
URL:http://fantom.gsc.riken.go.jp/.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in R Genomic Sciences Center and Genome Science Laboratory in RIKEN Genomic Sciences Center and Genome Science Laboratory in RIKEN Division of Experimental Animal Research in Riken contributed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sogabe,Y., Tagami,M., Tagawa,A., Takahashi,F., Takaku-Akahira,S., Takeda,Y., Tanaka,T., Tomaru,A., Toya,T., Yasunishi,A., Muramatsu,M. and Hayashizaki,Y.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
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                                                                                                                                                                                                          ATCCCAGTTATGAAGGACAATGACGTCATCGAGGTCTTACGACTACAAGCCCCGATTTGG
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                                                                                                                                                                                                                                                                                                                          CGTCCAAAACCTGATCGTTATTGTCAAGCTAAGTATACTTTCTGTCCAACTGGCTCACCT
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                                         AGGAGCACACTGACAGGCAAGAACTACACAATTGAGTGGTATGAACTTTTTCCAGCTGGGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /protein_id="bac27797.1"
/protein_id="bac27797.1"
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/translat.on="rdlatilgasptsgorwpvpykhfssprektdpycoakytfcoptg/translation="rdlatilgasptsgolucleheklmhdayderbstltdknytismybl-splownkondvievlehokaphekokogaacffbesiddknykhgoluclehokokokoteptsgorgoracffbekkietpolakytyrtyrkhlaberdterkkietpolakytyrtyrkhlaberdterkkietnytkifflysgebliylgnetsifgpkonktlalakkfygdfrykkilaberdkmhfikifnytkiftysgebliylgnetsifgpkonktlalakkfygdfrykhlaberdkmithkietnytkif
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xref="MGI:2395762"
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Pred. No. 8.8e-136;
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BX370641 Homo sapiens B
                                                                                                                                                                                                            Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
BX370641
                                                                                             Email: segref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7238
more information about this cluster, see
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http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq=CSOBAGO53ZHO3_CSO5016_1&cluster=7238.f.
contact : Feng Liang Email : fliang@llfetech.com URL :
contact : Feng Liang Email : fliang@llfetech.com URL :
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSOBAGO53ZHO3_CSO5016_1.
Location/Qualifiers
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BP 191 91006 EVRY cedex - France
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1 (bases 1 to 908)
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Mammalia; Eutheria; Primates;
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/db_xref="taxon:9606"
/clone="CSODL004YP03"
/clone="CSODL004YP03"
/cell type="B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED"
/cell_line="RAMOS CELL LINE"
/clone_lib="Homo sapiens B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED"
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Local Similarity
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cDNA Library Arrayed by: The I.M.A.G.E. Consortium/LLNL

DNA Sequencing by: National Institutes of Health Intramural

Sequencing Center (NISC)

Clone distribution: NCI-CGAP clone distribution information

found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg,
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Seq primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
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Mammalia; Eutheria;
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Plate: LLAM13163 ro
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National Cancer Institute, Cancer Genome Anat
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sapiens (human)
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/lab host="DH10B (T1-resistant)"
/clone_lib="NICHD HS_Ut1"
/clone_lib="NICHD HS_Ut1"
/note="Corgan: uterus; Vector: pCMV-SPORT6.1.ccdb (ResGen, Invitrogen Corporation); Site_1: Not1; Site_2: EcoRV; Cloned unidirectionally from microquantity amounts of mRNA from normal endometrial tissue (late proliferative phase, cycle day 13). Average insert size 1.9 kb. Library constructed by ResGen (Invitrogen Corporation)."
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/mol_type="mRNA"
/db_xref="taxon:9606"
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Search completed: April 22, 2004, 04:39:45
Job time : 3276.24 secs

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696 ACGACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAGTTG 736

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14 US-10-040-739-825

12 US-09-864-761-5832

16 US-10-264-049-1859

17 US-09-867-701-2579

18 US-09-867-701-2579

18 US-09-954-456-1363

10 US-09-908-975-10339

10 US-09-938-842A-5232
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Sequence 5832, Ap
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Sequence 2579, Ap
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US-09-957-974-2	US-10-240-453-26	US-10-239-676-18	US-10-221-/14A-108	US-10-312-841-1	US-09-790-988-1	US-09-918-995-13111	US-10-156-761-1	US-10-156-761-833	US-10-240-453-91	US-10-239-676-85	US-10-221-714A-113	US-09-918-995-21958	US-09-964-824A-273	US-09-962-436-281	US-09-880-107-3950	US-09-954-456-529	US-09-954-456-292	US-10-156-761-1	US-10-221-613-347	US-10-311-455-62	US-10-156-761-4003	US-10-424-599-95310	US-10-311-455-70	US-10-312-841-2	US-10-311-455-1113	US-10-240-453-112	US-10-311-455-1268	676-100	0-190-	9-938-
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ALIGNMENTS

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GENERAL INFORMATION:
APPLICANT: Gilbertson, Paul O.
APPLICANT: Gilbertson, Debra G.
ITILE OF INVENTION: SECRETED PROTEINS ENCODED BY
TITLE OF INVENTION: SECRETED PROTEINS ENCODED BY
TITLE OF INVENTION: CHROMOSOME 13
FILE REFERENCE: 97-38
CURRENT APPLICATION NUMBER: US/09/122,383A
CURRENT FILING DATE: 1998-07-24
EARLIER APPLICATION NUMBER: 60/053,613
EARLIER FILING DATE: 1997-07-24
NUMBER OF SEG ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 3.0
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                                                                                                                                                           Query Match 100.0%; Score 1084; DB 9; Best Local Similarity 100.0%; Pred. No. 7e-283; Matches 1084; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Homo sapien
FEATURE:
NAME/KEY: CDS
LOCATION: (47)...(1084)
                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 1486
                     61 GGGCGCGCTCGGGGAGACGCCTTCCTGGTGCTGGGCGCTGGCGCTGCTTTGGCTCCGCGGT
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GENERAL INFORMATION:
APPLICANT: Sheppard, Paul O.
APPLICANT: Silbertson, Debra G.
APPLICANT: Gilbertson, Debra G.
TITLE OF INVENTION: SECRETED PROTEINS ENCODED
TITLE OF INVENTION: CHROMOSOME 13
TITLE OF INVENTION: CHROMOSOME 13
TITLE OF INVENTION: CHROMOSOME 13
TITLE OF INVENTION: UCHROMOSOME 13
TITLE OF INVENTION NUMBER: US/10/010,050A
CURRENT APPLICATION NUMBER: US 09/122,383
PRIOR FILLING DATE: 1998-07-24
PRIOR FILLING DATE: 1998-07-24
PRIOR FILLING DATE: 1997-07-24
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 1
LENGTH: 1486
TYPE: DNA
ORGANISM: Homo sapien
FEATURE:
NAME/KEY: CDS
LOCATION: (47)...(1084)
US-10-010-050A-1
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PRIOR APPLICATION NUMBER: US 99/397945
PRIOR FILING DATE: 1999-09-17
PRIOR APPLICATION UNMBER: US 99/05804
PRIOR ETLING DATE: 1999-03-18
PRIOR PRILING DATE: 1999-03-18
PRIOR PRILING DATE: 1998-03-19
PRIOR PRILING DATE: 1998-03-19
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PRIOR PRILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,574
PRIOR PRILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,579
PRIOR APPLICATION NUMBER: 60/078,579
PRIOR APPLICATION NUMBER: 60/078,579
PRIOR APPLICATION NUMBER: 60/080,314
PRIOR FILING DATE: 1998-04-01
PRIOR FILING DATE: 1998-04-01
PRIOR PRILING DATE: 1998-04-01
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Publication No. US20040048304A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
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                                                                                                                                                 SOFTWARE: Pa
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TITLE OF INVENTION: 95 Human secreted proteins
FILE REFERENCE: PZ027P1C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/10/653,595
CURRENT FILING DATE: 2003-09-03
                                                                                                                                                                                         Remaining Prior Application data removed NUMBER OF SEQ ID NOS: 470
                                                            ORGANISM: Homo FEATURE:
LOCATION: (1520)
OTHER INFORMATION:
                                                                                                       TYPE: DNA
                                      NAME/KEY: SITE
                                                                                                                             ENGTH:
                                                                                                                                                                                                                                  FILING DATE: 1998-04-01
APPLICATION NUMBER: 60/078,578
FILING DATE: 1998-03-19
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RESULT 4
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CURRENT FILING DATE: 1999-09-17
PRIOR APPLICATION NUMBER: PCT/US99/05804
PRIOR APPLICATION NUMBER: PCT/US99/05804
PRIOR FILING DATE: 1999-03-18
PRIOR FILING DATE: 1999-03-19
PRIOR APPLICATION NUMBER: 60/078,576
PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,573
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PRIOR FILING DATE: 1998-03-19
PRIOR APPLICATION NUMBER: 60/078,579
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                                                                                                                                           SOFTWARE: Pa
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NAME/KEY: SITE
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NAME/KEY: SITE
                                                                                             TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                              LENGTH: 1751
                                                                                                                                                                                                                                                    OR FILING DATE: 1998-04-01
OR APPLICATION NUMBER: 60/078,578
OR FILING DATE: 1998-03-19
OR APPLICATION NUMBER: 60/078,581
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OTHER INFORMATION: I
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